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ABSTRACT

This is the first of five documents comprising a report on the problem of innovation and change in the context of projects supported by the National Center for the Improvement of Educational Systems (NCIES). The presentation begins with a report about educational change. It is a summary of case studies of 13 selected projects supported by eight NCIES programs. This portion of the report is intended to supply policy-relevant information to decisionmakers within the educational profession. It includes a discussion of the processes of institutional change: the structural characteristics of selected colleges, universities, and local school systems involved in varying degrees in cooperative training activities; and the aspects of selected project designs associated with efforts to achieve significant and effective changes in the goals and organizations of educational institutions. It also reports on how innovations are implemented by institutions and incorporated into educational practices. A second section discusses the rationale for the case study methodology employed in the project. An extensive annotated bibliography is included. Related documents are EA 004 857, EA 004 858, and EA 004 860. (Author/DN)

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INNOVATION AND CHANGE:

A Study of Strategies in Selected Projects Supported by the National Center for the Improvement of Educational Systems

FINAL REPORT

VOLUME I
CHAPTER I - INTRODUCTION
CHAPTER II - METHODOLOGY

EA 004 857

December 22, 1972

Report No. AAI-72-87

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The present series of volumes relates to two separate but related activities supported by the same contract (#OEC-0-71-3714), awarded to Abt Associates, Cambridge, Mass. by the United States Office of Education, Office of Planning, Budgeting and Evaluation (OPBE) in July, 1971. One study (Volumes I-III) focuses on the problem of innovation and change in the context of projects supported by NCIES while the other (Volumes IV and V) examines in detail the Career Opportunities Program (COP), also supported by NCIES. This means that separate, although overlapping, groups of people and central staff were involved in the total effort. At the same time, a wide range of individuals associated with NCIES and its programs participated in the planning of the study.

Within the Office of Education, we would like to thank Dr. William Rhode of OPBE, through whose office the project was supported. Dr. Robert Hall of OPBE, the project monitor, was of great help to us as we struggled to execute the complex field activities and data analysis. His wise counsel and continued encouragement have made this completed study possible. We would also like to thank the representatives of the various programs within NCIES with whom we discussed plans for the case studies part of the project. Their knowledge of the programs made it possible for us to develop a design that was relevant both to the informational needs of the client and to the real world of the projects to be studied. These Program Directors include:

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Career Opportunities Program

Mr. Lloyd Briggs
Vocational Education

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Teacher Corps

Dr. Malcolm Davis
Special Education

Ms. Joan Duval
Early Childhood

Mr. Marshall Frinks
School Personnel Utilization

Mr. Patrick McGreevy
Pupil Personnel Services

Ms. Mary Jane Smalley
TTT

Dr. Dustin Wilson
Evaluation Leadership Program

Abt Associates' project staff was composed of two teams: those working on the COP evaluation and those working on the case studies. Dr. Sydelle Stone Shapiro directed the COP study and Dr. Marvin G. Cline directed the case studies while serving as the overall project director from January, 1972. Mr. John D. Lyons was project director from the beginning of the project until January, 1972.

The success of the case studies was dependent on the quality of the information collected by the field staff. Data collection and first draft case studies were prepared by:

Wendy Peter Abt
Joseph Beckmann
Kenneth Carlson
Marvin G. Cline
Patricia Cook
John Doucette
Ruth Freedman
David Geller
Michael Gilbert
Linda Hailey
Keith McClellan
James Meer
Peter Miller
Ricardo Millett

Joseph Beckmann also served as field coordinator. In addition to those field staff mentioned above, editorial contributions to the case studies were made by John Butenas, Jay Birdsong, Ellen Hays and Denise Sadigur.

The principal authors of Volumes I and III were Marvin G. Cline, Joseph Beckmann and John Doucette, with major contributions by Dr. Jean Grambs and Ricardo Millett. Michael Hughes prepared the extensive bibliography.

Unfortunately, we cannot mention by name those project directors, staff members and participants of the thirteen case study sites that we visited. To do so would violate the anonymity of the case studies. However, they know who they are and that they deserve great thanks for their cooperation.

The project benefitted greatly from the services of several consultants. Dr. Jeffrey Eiseman of the University of Massachusetts assisted in the construction of the rating scales and their analysis, Dr. Ronald Corwin of Ohio State University contributed to the conceptualization of the data analysis and Dr. Jean Grambs of the University of Maryland contributed extensively to the conceptualization of the results section and assisted in the preparation of the final chapters of Volume III.

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Wendy Peter Abt
Joseph Beckmann
John Butenas
Kenneth Carlson
Patricia Cook
John Doucette
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Lorrie Stuart
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Ms. Laura Studen was field coordinator. Ms. Patricia Cook wrote the COP field manual.

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Brooklyn, New York

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Mr. Kenneth Harrison
Xavier University
New Orleans, Louisiana

Mr. Ulysses Harvey
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Hartford, Connecticut

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Las Cruces School District #2
Las Cruces, New Mexico

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Lafayette, Georgia

Mr. Joseph Williams
Duval County School Board
Jacksonville, Florida

Mr. Amos Wright
Jackson Municipal Separate School District
Jackson, Mississippi

Special mention is due Mr. John D. Lyons. Mr. Lyons was the original project director, serving until January, 1972 (when he was replaced by Dr. Cline). He is responsible for the way the study took shape, setting the foundations for later efforts.

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Finally, the secretarial staff of the project must be mentioned. In the 18 months of the project, there have been four project secretaries for the case studies: Ms. Denise Sadigur, Ms. Carol Folatko, Ms. Andrea Kovacs and, presently, Ms. Jane Allison. Ms. Anne Whitney has been secretary to the COP evaluation since its beginning.

Marvin G. Cline
Cambridge, Mass.
2 January, 1973

CHAPTER I
INTRODUCTION

This is a report about educational change. It is a summary of case studies of thirteen selected projects supported by eight different programs of the National Center for the Improvement of Educational Systems (NCIES) of the United States Office of Education (USOE). NCIES was formerly known as the Bureau of Educational Personnel Development (BEPD), but will be referred to as NCIES throughout this report. The report includes a discussion of the processes of institutional change: the structural characteristics of selected colleges, universities, and local school systems involved in varying degrees in cooperative training activities, and the aspects of selected project designs associated with efforts to achieve significant and effective changes in the goals and organizations of educational institutions. This report is a review and digest of strategies by which some individuals or agencies have brought about change; by which selected institutions have sought and received assistance in changing themselves; and by which some teachers and other school personnel have been aided or trained for the ultimate improvement of education in their schools. Finally, this is a report on innovation: how innovations are (or are not) implemented by institutions and incorporated into educational practices.

The report is intended to supply policy-relevant information to several different audiences within the educational profession. For the Office of Education, this report will serve to provide information useful in planning future change-oriented programs, both within NCIES and in any new agency that may emerge. For projects currently funded by NCIES this report will highlight strategies for the implementation of institutional change, and offer recommendations for institutional cooperation in innovation. For future projects designed to create new or different institutional procedures for training or retraining professional educators--through "renewal" or teacher centers, for instance--the report will serve as a start toward a planning guide: a framework for helping to determine the most favorable mix of project organizations, innovation strategy, and training content for reaching the desired goals.

Project History

Abt Associates was awarded a contract to conduct an impact evaluation of eight programs of the National Center for the Improvement of Educational Systems. The programs involved were the Career Opportunities Program, Teacher Corps, School Personnel Utilization, Vocational Education, Early Childhood, Special Education, Educational Leadership, and Training of Teacher Trainers. During the early part of the contract, a team from Abt, together with Dr. Robert Hall of the Office of Planning, Budgeting and Evaluation (OPBE), the project monitor, conducted a series of interviews with program management and key NCIES administrators. In addition, the Abt team studied the relevant literature and past evaluations of the programs. The result of this effort was a major revision in the work plan set forth in the original proposal.

The original request for proposal, and the Abt proposal based on it, called for the collection of highly quantitative impact data on a Bureau-wide basis. Specific areas of inquiry were to cover the impact of the programs on institutions, on the knowledge and attitudes of program participants, and on the students of participants. These data were to be collected from a sampling of projects and individuals so as to reach conclusions generalizable across programs to the entire Bureau. Documents describing the original conception of the study are contained in Appendix A of this volume.

Such an evaluation, however, was judged to be inappropriate to the needs of OPBE and NCIES for two significant reasons. First, the purpose of the evaluation was to draw statistical generalizations about the Center to guide future decision making. Yet our initial familiarization efforts found that each program had a different set of goals and objectives, and, further, that individual projects within programs often differed in this respect. In addition, there was wide variance in the programmatic nature of the sites, their target populations, and many other important aspects. These conditions made it extremely difficult to generalize even within programs. In fact, we found that several past evaluations of NCIES had attempted this approach with unsatisfactory results.

The second and most important reason for the redesign of the study was the fact that NCIES itself was changing. After the request for proposal had been released, a basic policy shift redirected the future efforts of

the Center toward the developing Educational Renewal Centers (ERC'S). Consequently, in the main the programs to be evaluated would not continue in their present form in the following fiscal year. The plan indicated that they would be replaced by new projects much more concerned with system-wide in-service training and improvement. It then became our charge to gather and analyze information on which such things as "teacher centers" or "renewal centers" could be planned, and to base our analyses on the impact of existing projects in institutionalizing a number of changes through training programs and the process of inter-institutional cooperation. Therefore, the following month was spent in redefining the nature and scope of our project.

(Since that time new decisions concerning educational renewal have been made. However, this shift does not affect the fate of most of the NCIES programs. They are still scheduled to be phased out, with Teacher Corps (to become a part of ACTION) the sole exception among the eight programs studied.)

During this month of reconsideration, Abt staff conducted interviews with program staff and Center administrators to determine how to be responsive to the emerging informational needs of NCIES and OPBE. The operational side of the new approach had to be both technically feasible, and viable within the budget of the original proposal. Several preliminary study plans were prepared and reviewed by the major actors within OE, including Dr. Robert Hall, Dr. William Rhode of OPBE, Dr. Roy Forbes of the Office of the Deputy Commissioner for Development, Associate Commissioner for Educational Personnel Development William Smith, director of NCIES, and other Center administrators and program manager. Meetings with OPBE staff were held in Washington and at the Abt offices in Cambridge, Mass., during the development of the revised work plan.

Finally, on July 29, 1971, an operational plan was presented to OPBE. This plan was given general approval, although certain revisions were suggested by OPBE. These revisions incorporated into the plan which was then presented at a meeting to the program directors of NCIES and other interested parties. Since this plan also called for an intensive study of the Career Opportunities Program (COP), a separate

presentation was also made to the management of that program, including Dr. Wilton Anderson, then Director of COP. The results of the survey of COP are the content of another volume of this report.

Basically, the revised operational plan consists of two relatively separate tasks, the COP impact evaluation and the series of case studies. The case study approach better reflects the new concerns of OPPE and BEPD: the identification of effective planning, implementation and operating strategies currently employed in successful projects. Some additional constraints to the selection of sites were introduced at this point: the need for a wide geographic distribution of sites, and the need to represent each of the eight programs (including Pupil Personnel Services) in at least one site.

During the development of the revised work plan, it was suggested by both the director of the Pupil Personnel Services (PPS) program and Dr. Smith that the PPS program be added to the study. There were two primary reasons for this. First, PPS is a new program which has not conducted evaluations in th past and does not plan any for this year. Second, the School Personnel Utilization (SPU) program was conducting its own evaluation this year, using the case study approach. It was felt that the imposition of another intensive case study examination at an SPU site would be too burdensome. Consequently, it was agreed to substitute PPS for SPU in our case studies. Since PPS is a new program, slightly different criteria for nominations applied.

Background to the Study: Previous Evaluation Efforts

Since NCIES (originally BEPD) was formed in 1967, its programs have been under constant review, undergoing several major evaluations. Early in its history, NCIES had Daniel Stufflebeam design an evaluation system for the Bureau. Most recently, the Training Teacher Trainers program (TTT) was evaluated by a group headed by Malcolm Provus, Teacher Corps was evaluated by the Resource Management Corporation, and the School Personnel Utilization program (SPU) by Florida State University. In 1970 a process evaluation project developed a set of instruments to provide the Center's program officers and central staff with an ongoing management information system for all programs. The Career Opportunities program developed a similar system for its projects. These studies and evaluation projects were coordinated by

an ongoing commitment to provide "formative" and "summative" information on the process and impact of innovative training on programs on educational institutions: their staff, organizations and curricula. There have been two major directions in evaluations supported by NCIES. On one hand, large scale program-wide or Center-wide evaluations have been ventured. These studies have attempted to treat the program in question (or the entire Bureau) as more or less homogeneous and to apply survey research techniques to collect and analyze quantitative data on the operations and impacts of the program evaluated. The goal of this type of study is generally summative in nature, implying a desire to make statements such as: "Teachers trained in Teacher Corps are significantly more 'flexible' than teachers trained in other ways." The intended result of such a study is a generalization about the overall effect of the entire program. However, there seemed to be far too much variability in program characteristics (including goals) both between and within programs to make this type of research applicable to the present study.

The other direction of evaluation within the Bureau has been the project level evaluation. These include not only quantitative summative studies, but also "softer" approaches. For example, the group of projects located in Louisville, Kentucky contracted with Carl Rogers for an evaluation. Some projects with doctoral level students (such as TTT) had project evaluations conducted by students and their advisors in the course of dissertation work.

In general, these two styles of evaluation are geared toward satisfying different informational needs. Local project directors are concerned with decisions about the operations of their projects, idiosyncratic as they may be. Program officers are concerned with the overall effectiveness of the general strategies supported by their program differentiated staffing, team teaching, use of paraprofessionals, etc. Finally, the Center is concerned with administrative issues in managing funds as well as in justifying the existence of each program to higher levels within OE and to Congress.

The general effect of these evaluation efforts has been to increase project and program staff awareness of the complexity of managing the many

variables which distinguish idiosyncratic projects. Combined with ongoing formative evaluation by the Leadership Training Institutes affiliated with several of the NCIES programs, the data available to OE planners have sometimes tended to overwhelm the specific information needs for which they were collected. Thus, our intention was not to contribute to the existing literature on individual projects by monitoring existing grants, because that function was already being fulfilled by other contractors, agencies, or consultants. In fact, much of the existing evaluation information was not relevant to the task of collecting information and performing analyses to highlight strategic organizational, and innovative characteristics of exemplary projects. Our charge, then, was to provide general information about which strategies applied by the thirteen sites selected for the case studies show promise for use by similar programs and projects in the future.

Conceptual Problems: Impact

In redesigning the study to meet new needs, interviews were conducted with program staff, planning staff, and project monitors in the Office of Education. We also conferred with staff members of "Task Force '72," the group charged with developing new programs to provide the Center's services. From these interviews emerged a set of conceptual problems for our study. The Office of Education was concerned about four general categories of variables on which projects may have impact:

1. The characteristics of institutions involved in NCIES projects, and the nature of the relationships among these institutions;

2. The innovations in training process and curriculum supported by the projects;

3. The recruitment, selection, admission and placement procedures for participants; and

4. The general substantive design of the projects.

Each of these categories of variables presented different kinds of conceptual problems which had to be dealt with continuously in the course of the study. In terms of the institutional characteristics of existing projects, emphasis was

given to the complex relationships between Institutions of Higher Education (IHEs), Local Education Agencies (LEAs), State Education Agencies (SEAs), communities and other groups or agencies that might be involved. The very nature of each NCIES project dictates that there be at least two institutions involved: at minimum, an IHE to provide training and an LEA in which to base the practicum component of the training. This concern also involved certain research issues which appear in the literature with some regularity. In short, the research question was whether programmatic aid through different kinds of institutions or institutional arrangements was influenced by the kind of operation planned by a given project. We were then concerned with how that difference affected the training and service sponsored by the Center at a given site.

In studying training and curricular innovations, priority was given to understanding the degree and direction of change which participants (staff, faculty, students, or client systems) attributed to the project. We did not expect to be able to identify effects strictly attributable to a project. We were willing to deal with "softer" issues, more subjective judgments, and greater detail of description. For example, it would have been difficult to measure in absolute terms such factors as the relative balance between in-class and out-of-class activity for trainees; the orientation of the curriculum and the planning which went into a special or innovative curriculum for the project; and the kind, degree, and range of supervision in the practicum or service-oriented part of the overall curriculum. Therefore, it appeared to be more important to assess such issues relative to past procedures in given institutions, and subjectively, in the context of how they affected the trainees, the staff, and the institutions at a given site.

This approach was based on several considerations. <u>It was not the purpose of the study to evaluate a set of programs, nor to evaluate individual projects in terms of overall program objectives</u>. It was rather our purpose to understand the <u>constraints</u> a project or project director had to face, and the <u>strategies</u> by which those constraints were overcome. Certainly the descriptive and analytical framework was evaluative in part. Yet the evaluative or success criteria were <u>project specific</u>. The degree of change perceived by a project--by staff, trainees, and leadership--was more important than the degree

to which a project adhered to given objectives, or the level of innovation relative to other institutions. Another major consideration was the distinction between the terms "innovation" and "change," which is discussed in more detail later in this chapter. Finally, the responsibility for policy oriented research directed our conceptual efforts toward the implications of certain general project, program and center-wide strategies for change and innovation. The study had to deal with change and change theory exclusively in the context of decisions which are and will be the responsibility of programs in the general area of concern reflected in current NCIES thinking. This is not, then, a study on the general question of education change. Again, this issue is discussed in greater detail below.

With regard to recruitment and selection, the prime concern was the projects' services to specific target groups. For the majority of the projects and for the entire Center, a central mission was to improve educational accessibility and service to and for minority group members. This concern was reflected in the initial selection of sites for these case studies. Clearly, the concern interacted with others, for in some cases it was a major "innovation" to recruit minority members, and in some cases a major inter-institutional activity. Yet the change in procedures could reflect a more substantive institutional impact. Such change could extend beyond the scope of individual admissions and, in some cases, beyond the scope of specific projects. We were interested in such change, where it occurred, for its implied effect on institutions just as much as for its observed or reported impact on individuals, faculty members, or institutions.

Finally, in terms of the design of projects, the emphasis was on the kind and degree of interdisciplinary or interagency overlap and cooperation. The programs planned to succeed those considered by this study were to be concerned with maximizing impact by coordinating different sources of funds to meet specific targeted needs. Even among the current NCIES programs considered here, there was an emerging policy of interagency funding or multi-target goal development. For example, in several sites TTT and COP were overlapping programs, with TTT offering supervision for paraprofessionals in COP projects.

Such cooperation was intended by policy makers as a means of getting maximum mileage from limited funds. That concern was reflected in the study by an examination of the different levels of a project's operations, to find out the kind of incorporation or cooperation which occurred. In a number of cases this examination was limited to the degree of interdepartmental or interdisciplinary cooperation achieved by individual projects, since multi-agency funding did not exist. Yet in all cases, the relationship of the project to other projects, degree programs, or career mobility programs was examined in detail in order to denote the management and planning strategies of the projects themselves.

These four areas of conceptual development emerged in the preliminary, or familiarization, phase of the study. Together they contributed to an increasingly concrete view of institutional impact, of the impact of NCIES in several sites. The idea of institutional impact became the focus for data collection. "Impact" was defined for this study as: change in institutional characteristics, either internally or inter-institutionally; in training or curriculm; in recruitment, selection or admission; in placement of trainees; or in community response.

A Theoretical Framework

It is not possible to undertake an effort such as the present one without foundations. There is a framework underlying this study, both in terms of its theoretical orientation and its focus on the problems facing the Office of Education. First of all, it should be stressed that this study is not typical field research in organizational dynamics. We hope to address issues of direct relevance to OE planners and program managers rather than to make general contributions to organizational theory. This is not to say that we do not see this effort as being relevant to theoretical issues. Rather, we have directed our efforts primarily towards investigating the effects of variables that can be manipulated by OE through their program guidelines or through other mechanisms such as their grant award procedures. In short, our task may be characterized as policy research.

The difference between policy research and other forms of social science research is the level and type of decision making which may be guided

by the findings. This study is designed to provide information to policy makers, at the national, state, and local level. It is not designed to provide a new model of educational change, nor suggest widely applicable rules or laws.

Because this study is intended to guide policy making, there is but a limited utility in updating existing change theory and suggesting revisions to that theory. In the course of our research, a wide range of theory was reviewed and there were regular attempts to check theory with the data from the case studies. To complete the prelude to a research design, it was necessary to specify the processes by which institutional impact was expected, in order to develop general hypotheses about the projects and the institutional changes intended by the Bureau. Early in our familiarization meetings and interviews, two terms emerged: innovation and strategy. In our literature review, a third was highlighted: organizational response to change.

Innovation

Defined as a process, innovation became similar to Everett Rogers' definition of the process of adoption: inducing new institutional and organizational behavior through the identification of adopters, and promoting the new behavior through an institution or organization until that behavior becomes accepted. Such a process involves:

- The specification of the desired new organizational behavior (a goal);
- Development of techniques for implementing the new behavior (strategies); and
- The actual implementation of the innovational techniques and institutions' responses to the interventions.

As with inter-institutional planning, this problem area reflected the nature of the projects, since all applied the language of innovation and all were planned to implement a variety of innovations. Innovation, reform, and new types of training and curriculum have been consistent process goals of the Center from its beginning. Plans for new programs were being developed to maintain these goals. We were concerned with the dimensions of

change and the overall direction of change in a project, equally as much as with the occurrence or absence of change or innovation. In thus defining "innovation" or "change" as both process variables and, tentatively, as impact variables, we had to deal with the specific problem in the literature and in the projects of overlapping definitions of innovation and change.

For the purposes of this report, let us consider the institution as a kind of spider-web. A 'change' may pull the spider-web in one direction or another, but the essential pattern remains, and in time even the skewed 'pull' which resulted from the change is absorbed and the web returns essentially to the shape it had before. An 'innovation', in our definition, means breaking the web so that it has to be restrung differently and takes a shape which is not even potentially similar to the original shape. Using the spider-web analogy, an innovation may un-hook one of the main strands of the web so that it must be hooked up someplace new (i.e., another source of funds) which will in turn affect the shape of the resulting web. Or the web can be torn so that large pieces are now attached at very different places, covering either a wider area or a different one, and a different shape suggesting different service delivery systems. Change, however, may merely be a strengthening of existing pathways or hooks, addition of more rounds in the web, or maybe even joining several similar webs. Both structures are designed to catch "flies" - students, clients, community support, prestige. Thus, this definition assumes only partial <u>qualitative difference between change and innovation</u>. Both are modifications of the existing structure. Innovation can become "revolution" when the existing structure is demolished and a very different structure is put together to perform some of the old functions.

Change can be considered conservative channels which have proven useful, or to increase the number of channels where the function has been accepted and more will be a good thing. Although change may involve reallocation of scarce resources, so that the strengthening of one segment may mean others remain weak or somewhat vulnerable, nothing really 'new' has occurred. Lest this seem a down-grading of change, let us add that it would be very exciting if schools generally strengthened the delivery of education to all children. This would not mean new directions or new

and startling structural changes, but a determined focus of energy on what is the accepted role of schools - to educate. In this instance, Title I of ESEA is within our 'change' definition. Here more resources were to be placed where the system was most inadequate in order to do the job the schools are in business to do. It is a measure of the difficulty of accomplishing even this kind of change that Title I has been shown to have been subverted in most school systems so that poverty children did not, in fact, receive massive educational extras. Thus one has to be extremely careful in asking for either change or innovation. The press for innovation, as in educating the Title I target group, may well be a function of sheer frustration in trying to shift even a minimum of resources within the existing structure. Innovation in this sense is a way of by-passing the system (structure) by pulling out one piece, and letting the rest of the system stay virtually untouched. In this instance, the model would be the "encapsulated" innovation: - a strange, weird, new process can go its merry way without any visible impact on the surrounding system. Or the innovation may be something tacked onto the edge of the system (Head Start), with little or no potential for making any structural change in the original web, but allowed a vigorous life outside - as long as it stays outside!

A <u>successful</u> innovation, then, is one which eventually is absorbed; the encapsulated process is taken into the system so that no visible boundaries exist any more, or the appended innovation merges with the parent web. The parent web, however, may be somewhat different as a result, but it is hardly visible by those who have by now become so used to the web's new features that they seem very familiar. There are of course isolated innovations which remain suspended or encapsulated and eventually die.

The history of educational innovation (as distinct from educational change) is fairly dismal. Ideas which were greeted as new and different in the 1940's died out, and were resurrected in the 1960's and 1970's as new and different. Many if not most of the innovative ideas in education have been implicit (if not explicit) in educational writing from the time of

Pestalozzi, Herbart, Froebel, Rousseau, Montessori, and Dewey; and current innovations are variations on the same themes. That the reinvention of progressive education has to take place every other decade is worthy of some thought; educational institutions may in fact be available for change, but not innovation.

If the above definitions of change and innovation are acceptable, then an examination of the results of the present study can be viewed on a continum of degrees of change. That is, innovation always implies change, but change does not necessarily imply innovation. Also, where a project has seemed to shift focus from what was considered an innovation to one which is quite different, or where a project has little possibility for survival without outside funds, then one can perhaps detect the sinister (sic) shadow of an innovation.

It has been suggested that one test of an innovation is whether or not there is resistance. However, change can also produce resistance, when it means some shifting of funds or personnel, even though the structure is not touched. Even in the case of resistance to innovation, one has to be clear about the source of the resistance. If there is strong and persistent resistance within the institution, no matter how strong outside support may be, the innovation will either collapse or be re-focused so that it is only a 'change.' Moderate institutional acceptance or at least no resistance to an innovation, can not ultimately survive resistance from outside. No matter how agreed upon the merits of a program (sex education, desegregation, community organization) as perceived by 'experts', resistance or opposition outside the institution (local or national) will effectively modify the innovation if not entirely destroy it.

With this view of the role of change theory in the present study, we should now like to explore its implications for our substantive orientation. Whenever educational leaders deliberately intervene in the educational process intending to produce some ultimate change as the output of their intervention, they open a Pandora's Box full of social, political, economic, institutional, and interpersonal issues of awesome dimensions. It is too simple to ascribe this to the open, diffused organizational systems, which characterize American educational institutions. It is true that power is distributed in dozens of different ways across Local Educational Agencies (LEAS)

and the State Education Agencies (SEAs) of which they are a part, so that each of the several groups interested in the educational structure may have multiple inputs at various points on the decision making hierarchy. It is also true that, at the federal level, the Office of Education has traditionally restricted itself to advisory and supportive roles in terms of program planning, functioning as conduit for federal support funds. This constraint is largely the result of the Constitution historically granting the ultimate authority for education to the states, and has not been seriously altered despite recent Congressional appropriations of targeted funds to LEAs states. Programs such as ESEA Title I, which provide funds for special problems and special target populations, are nevertheless administered by the LEA or SEA accepting them. Congress and the courts have tended to avoid strict enforcement of program guidelines, so that the role of OE in these cases remains advisory.

Despite the openness and plurality of the American educational systems, it is much too simplistic to ascribe the difficulty in producing organizational change in them to this factor alone. Educational organizations differ from other organizations in several very important respects. Although the organizational structure of many systems appears to be hierarchical, highly centralized or even authoritarian, an order from above (from a LEA superintendant, Institution of Higher Education (IHE) dean or SEA official) is met with a variety of responses. No principal can tell his teachers how to teach in the way that a factory foreman can direct his employees to operate their equipment. And this perhaps is as it should be, because most teachers know how to teach better than their administrators. Further, almost all educational organizations are supported with public funds. Consequently, they are, in theory and in perception, accountable to those who supply the funds (taxpayers, legislatures) for their actions.

But in one respect, educational organizations are like all other systems. They have their own unique developmental histories, an intrinsic need to develop and maintain some organizational identity, and adaptive mechanisms to deal with intrusive forces. Change, whether it stems from the normal developmental processes within the institution or from external sources, is an event of consequence for the institution and it must be dealt with. This is not to say that all change meets with resistance, but that all external

pressures to change (such as those applied by NCIES projects) must be responded to in some fashion.

It would at this point be useful to set forth some assumptions about the nature of institutional responses to pressures for change. This will serve as a framework within which we may set our study. Note that we are not intending to test the adequacy of these notions here. Rather, we are presenting them as the assumptions which guided our selection of variables and our search for significant issues. It is within this framework that we shall organize our data, analyze them, and attempt to draw conclusions about the operation of the projects under study.

Institutions establish their identity in the form of goals and structures for acquisition of those goals. Secondary structures are quickly developed to deal with the managerial, task-oriented issues. Formal and informal rules emerge which facilitate either the goal or task-oriented functions and, on occasion, both. In any case, goals (either the external goals of the institution or the internal goal of maintenance of the system) and the structures designed to accomplish them constitute the identity of the institution. When an external force seeks to produce change in these systems, there is a finite set of response categories available to the institution: resistance, submission or adaptation.

An external force may be resisted on the grounds that it is harmful either to goals or management of the organization. This perceived threat may be countered in an infinite number of ways. Yet there are many times when change will be accepted without resistance. If the new way really is better than the old (and is perceived as such by the organization), or the force for change is too powerful to resist, the change will be incorporated into the institution.

More often, the final product of such a confrontation falls between these extremes. The organization may adapt itself to render the discrepancy produced by the change less threatening or it may adapt the invading change, redefine its aims or redirect it to peripheral parts of the organization. There it can be isolated and kept minimally harmful.

Educational Institutions

Schools and colleges are basically conservative. Although some observers feel that educators are faddists, jumping on every new band-wagon which promises to deliver something new and different, a careful examination of the so-called fads does not reveal many of them to be either long lasting or of major structural significance. The story of change in educational institutions is one of slow accretion, small additions and modifications over time with major institutional features hardly touched at all. Although today's public school does look different from the Dame School or Academy of the 17th and 18th centuries, modifications which have occurred have been essentially towards performing the same functions: literacy, social control, vocational preparation, acculturation. These goals for a mass society have produced an organizational pattern which is recognizable throughout the country, and influences non-public schools as well. The schools are basically hierarchical institutions, pyramidial in form, with power located at the top and directed down towards subordinates. Defining educational limits, priorities, and other substantive questions rests with a lay board, who also of course control finances derived from public funds. Individual teachers, schools, or school sub-systems cannot extricate themselves from this network. In almost every instance, new programs (changes or innovations as they may be defined) affect some classrooms, some schools, some positions; rarely if ever is a whole system 'changed.' It is a bit like nibbling at a piece of cheese to see if it is safe to swallow more, or if there is a trap at the other end. The story of educational change is of programs which come and go, leaving little if any trace behind. The ones that remain have been adopted by the system because they 'fit': facilitating the system in doing more of the same with some promise of increased efficiency or peace.

Both public schools and colleges are essentially conservative, but for somewhat different reasons. The pre-college institutions are conservative because they deal in a scarce and highly valued commodity - one's own children. With only two or three bearers of one's own immortality, no parent willingly submits this precious cargo to be tampered with. Experiment with my children? Never! This does not simply reflect "if it was good enough for me, it is good enough

for my children," kind of thinking. That is far too simplistic an explanation for a very deeply felt and ubiquitious phenomenon. It is rather the emotional burden placed by parents upon children, their investment in the children of their hopes for the future. In addition, children are visible current evidence of parental success (of failure). It is understandable that schools would be conservative if they only educated children of the elite, in which instance they would have an important mission in supporting the status quo. When all the children go to school, however, support for the status quo may be dysfunctional. It is the status quo which keeps millions of individuals in subsistence level or below, and which deflects the ambition of those at the bottom of the heap. Fortunately for those who benefit most from the status quo, parents at whatever level have been socialized in the same way: children are too valuable for anyone to try out new or different procedures on them. While what exists is not too good, who can assure that something new will be better? If the schools have not served the poor very well, maybe a new proposal will serve them even less well.

The poor often are among the most conservative of the parental and community groups which the school serves. Again, this can be attributed to a social norm which identifies school failure as something inherent in the individual. It is not the school who has failed, it is the child (or his parents). Thus every parent who has been defeated by the schools wants his children to succeed <u>in the same school</u> as a kind of vindication of who the parents are - basically good (educable) people. 'If the school changes too much, what's the glory? Perhaps the hurdles aren't really as high, or the success really as significant as when I tried, and failed!'

The have-nots are understandably suspicious of any changes in institutions made from on high, which is seen as the same thing as the elite. It has never been in the interests of the poor that elites have supported policy changes - and this the poor know very well indeed. As critics of programs for 'disadvantaged' children have pointed out, many times this means not educating such children rigorously at all, but letting them express their 'natural' style, and remain ignorant of reading, writing, arithmetic, and other survival skills - the mastery of which might lead many

out of poverty or disadvantage. The self-defeating aspects of this view of educational change and disadvantaged clientele are behind most of the attempts to change schools and educational programs Few if any such programs penetrate the institution, not only because they fail to deliver 'instant' learning (most of them couldn't anyway because they are too shallow in design or understanding of the dynamics of learning) but because general community support cannot be mobilized. Furthermore, school functionaries who have most to do with impoverished communities typically do not believe that they can be fully educated (and some believe they do not deserve to be). The believers and the missionaries among educators are not welcomed in front-line or significant decision-making situations. Such individuals either outrage the system and are fired, or frustrated so by the system that they leave, or give up and become passive or bitter pieces of the system. These latter individuals are often the first to say about almost any new thing: "We tried it, and it didn't work," or "It won't work with our kids - I know."

There are, therefore, very important psychological and sociological reasons for the conservative nature of the schools. We shall discuss later where the institution may be available for change, because all is not hopeless. But let us look at institutions of higher learning to see if they, unlike public schools, can change.

There are many kinds of colleges and universities in the United States. This very variety has made it possible for most IHEs to remain basically unchanged over the decades. Since attendance is voluntary, there is little if any need to change in order to attract clientele, particularly when there are more students who want to get in than there are spaces (especially for public institutions). Private institutions, more sensitive to changing demands, may appear to change in order to cater to new clients (students). However, the interchangeability of the degree, or credits earned towards a degree, limits the kind of institutional difference available. A college cannot be so different that its students are kept out of other educational institutions or prevented from obtaining certificates, licenses, etc. Accrediting associations, extra-legal bodies which are voluntarily assigned the policing function to see that institutions are in fact interchangeable,

only limit innovation to the extent that the subscribing institutions approve. Professional accrediting associations are also professional protective associations, exacting a high institutional price for delivering a professionally acceptable product: doctor, dentist, lawyer. Entry into professions is guarded by this academic market exchange, and this in turn makes institutional change difficult, and unlikely.

There are a few genuinely innovative colleges; typically they are private, expensive, and small. Rich, old, Ivy League type colleges may have some innovations, but the very fact that they take place in such selective institutions makes large open-admissions universities 'know' that such innovations would not work for them. Size of institution is almost without question a major inhibitor of change of any significant kind. Too many people, too many pieces, both within and outside (alumni) make change improbable. The hierarchical nature of the college and university, although similar to that of the schools, differs in degree of close control that is possible or permissable. Trustees can veto changes, but usually do not meddle with professional training if proposed changes have full professional support. The mystique of the professional is particularly effective in medicine, engineering, and dentistry. The closer the professional training comes to everyday life - nursing, teaching - and the lower in status and prestige (which may be a result of being close to everyday life) the more likely it is that the conservative control of trustees will become visible. Most college and university trustees are white, male, rich, and old. These characteristics relate to conservative attitudes. Public institutions are more apt to have the most conservative trustees; public money is at stake.

The instructional staff of colleges and universities, although apt to be suspect as intellectuals, are conservative when institutional innovations are proposed. The most radical psychologist or sociologist who advocates very unconventional theories, typically adheres to the graduate school syndrome: rigid academic standards, 'tough' screening of candidates, and 'publish or perish' for promotion within the system. When students were agitating for change at many campuses very few staff members joined, and these were often non-tenured and peripheral individuals. Also, few student

disturbances were directed at demanding educational reform in any significant fashion. Pass/fail grading, later time to drop courses, more electives, dropping unpopular requirements such as physical education and foreign languages, addition of 'instant courses' in Zen or macrobiotics or ecology which did not need to be institutionalized - these did happen - and they made no difference whatsoever in institutional processes.

Most students would like IHEs to be more humane, teachers to be more interesting, and dormitory food to be more palatable, but few want college to be really different. In fact, if college were to undergo very significant change students and parents might worry that the education would not be 'useful' - that is, would not be worth much in the academic or any other marketplace.

Two other forces operate to keep both schools and colleges conservative institutions. Schools, like churches, engage us at a close emotional level. It takes an act of conversion to change one's religious affiliation. There is very great resistence to any changes in religious ritual. Schools are quite similar because, as was pointed out, they have our children. But beyond this, they are one of the few general institutions which require some portion of each of us. Other public institutions, such as courts, hospitals, the post office and the military, impinge on us only once in a while, and then when we are most helpless or fragmented. Or, like the post office, it doesn't matter as long as its simple service is accomplished. Schools are within the public's control so that they can keep their predictability.

The acculturation function of education also makes the school peculiarly resistent to change: if there are any eternal verities then the school is the only place where everyone can be exposed to them - such as spelling, grammar rules, the multiplication tables, and acceptance of adult authority.

Critics of education can point out the many ways the schools fail. Everyone is an expert on education, and few are satisfied with the schools. But there is tremendous social inertia - or active opposition - when plans for major overhaul are proposed. And maybe this resistance to change is a good thing. It may be symbolic of an important social and psychological reality: the more things change, the more must some things remain unchanged. Perhaps those who advocate innovation and change in the schools need to re-examine what they are really asking people (parents) to do. If this is a valid view

of the problem of educational change, then perhaps different strategies can be devised in order to see that schools do better the job that the public wants done - namely, educate children and youth.

As mentioned earlier, a second factor which inhibits change in schools and college is that the bureaucratic structure does not work the way such structures work in other kinds of hierarchical organizations. Although orders come from above to those below, and there are status differences, those below may in fact be superior to those above. A physicist can intimidate any college president (unless the president is also a physicist and has kept up with his field). A first grade teacher can make it quite clear to a superintendent, supervisor or principal that she knows more about beginning reading than they do - and she may well be right. The hierarchy of professionals does not support directed change. Although new ways of teaching and classroom organization may be tried out in elementary and secondary schools, they may founder (or be sabotaged) because the teachers who 'know' do not see the new procedures as suitable, for their subject or their pupils. A college administrator would be considered out of his mind if he were to tell any instructor how to teach anything. It just is not done.

Nor can colleagues control each other. A department or group of teachers may agree on changed procedures, but as soon as new personnel come in, or some of the original group leave, it is very possible to revert to the status quo ante. Only if the group has control over who enters, and can socialize them to a new set of norms and behaviors, can any segment of a school hope to institutionalize a change or innovation. This is very difficult to do in practice because colleagueship is not built into the structure. Teachers 'own' their classrooms; "these are my students." Tenure makes it possible for teachers to protect their domains without fear of reprisal.

We have not mentioned all of the other constraints upon the schools which make change or innovation improbable, but most of them are the same as for any institution: tradition, ritual, age of participants, fear of new things, etc. What we have tried to do is to pull out some of those elements which make schools and colleges less amenable to modification than many other institutions.

Identifying strategies would appear to be a simple task, since one could merely read the program guidelines. However, words mean different things to different people, as is obvious in examining projects developed under the same program. In fact, an overall strategy of Federal programming in education appears to be that rather wide discretion will be allowed in project development within any given title. In the developmental phases of programs this in undoubtedly valuable, since a wide range of experiences trying out a number of approaches should result in identifying those with potential and those which are dead-end. However, and our study undoubtedly reflects this view, there comes a time when one ceases to repeat essentially similar 'experiments.' The object of this study, therefore, is to identify some strategies which appear to bear a greater potential for supporting change and innovation.

In the remaining sections of this chapter, we approach the issue of strategies from several different directions. First we present a review of the literature, identifying strategies which appear frequently in studies of leadership and organizational change. Next we review the strategies we actually found at work in the case study projects. We then contrast these reviews with the Office of Education's strategy assumptions and overall approach to stimulating educational change. Finally, we use facet analysis to synthesize and condense these three sources - the literature, the case studies, OE policy and practice - into a system of hypotheses represented by a mapping sentence.

Leadership and Change: A Review of the Literature

The literature on organizational change displays a uniform assumption of the utility of the leader-follower dichotomy. Where this hierarchic arrangement is questioned at all, it is usually an effort toward a temporary necessity for improved communication, on some level by some means, between management and subordinates, between school administrators and teachers. The literature that purports to deal with organizational change tends to point to the necessity of closing the schism between leader and follower to the degree that these roles are apt to be in conflict.

The literature on emergent leadership demonstrates that in some instances the demarcation between leader and follower is not always easily perceptible when the empirical circumstances are carefully examined. When this is the case the central focus of literature treating the process of change in organizations will be expected to be on specified organizational characteristics which exist, or can be established, to promote the exchange of communication and interaction between persons performing different functions in an organization to see who is in fact leader or follower. Lurking among the assumptions is the acceptance of the legitimacy and appropriateness of hierarchical bureaucratic structures of management. This is accompanied by the implication or assertion that a man with power initiates change and others do the changing. Whether change does in fact occur most effectively - or exclusively - as the result of individual actions or must occur only as the result of bureaucratic decisions is one focus of this review. Another focus is to examine the implications hierarchical management relations may have for innovation adoption in schools - specifically, are there particular strategies of change indicated by the literature to be of surpassing effectiveness in yielding organizational innovation adoption?

Rogers and Shoemaker* are most representative in the literature on leadership and change of positions relying on the individual as the effective

*Communication of Innovation, New York: The Free Press, 1971.

adopter of innovation, whether independent of, or as a part of, an organization. Their position may be summarized as follows:

> If we regard a school as a social system, then the school system's adoption of team teaching will lead to individual teacher's decisions to change their teaching methods. The aggregation of a multitude of individual changes produces a system level alteration.*

First, the school is considered as a social system with "social" construed as a collection of individuals. There is some ambiguity about the concept of adoption, whether it means decision to accept and proceed with implementation; or whether it refers to the implementation process. The assumption is made that within the school system it is the administrator who makes adoption decisions. This assumption needs examination. Further, it is implied that, within the school system, teachers are able personally to decide on whether to accept the adoption. This latter point is crucial, for on it will be based the decision of which strategy to employ when attempting to persuade the acceptance of innovations.

According to Rogers and Shoemaker, an innovation is "an idea, practice, or object perceived as new by an individual." (p. 19) In discussing the rate of adoption by individuals of innovations, Rogers and Shoemaker list the following as the most important characteristics: the innovation itself must have a (1) relative advantage ("It matters little whether the innovation has a great deal of 'objective' advantage. What does matter is whether the individual perceives the innovation as being advantageous."); (2) compatibility (the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of the receivers); (3) complexity (the degree to which an innovation is perceived as difficult to understand and use); (4) trialability (the degree to which an innovation may be experimented with on a limited basis); (5) observability (the degree to which results of an innovation are visible to others). (pp. 22-23)

*Op. cit. Also, Neal Gross, Joseph B. Giacquinta, and Marilyn Bernstein, Implementing Organizational Innovations, New York: Basic Books, Inc., 1971, p. 21. Gross states that "A study conducted by Carlson (Adoption of Education Innovations, 1965) revealed that the mere adoption of programmed instruction by school systems did not necessarily lead to the desired change at school level."

Rogers and Shoemaker consider the merits of the innovation itself important in the decision by an individual as to whether to adopt that innovation. The following stages characterize the process of innovation adoption by individuals.

Before an individual can assess an innovation, he must know about it and must understand it (knowledge). Then it is possible for the individual to form either a favorable or unfavorable attitude toward the innovation (persuasion). If the situation encourages continued consideration*, the individual will next engage in activities leading to the choice of accepting or rejecting the innovation (decision). Upon acceptance, the individual will seek reinforcement for his decision - or he may decide to reverse the decision and reject the innovation (confirmation). But it may be objected that, while an individual is free to adopt <u>personal</u> innovations, he is, as a member of an organization, at least in need of <u>support</u> by his superiors before he can adopt innovations which affect his behavior <u>in the organization</u>. For example, teachers are not able to adopt an open classroom structure if administrators are unwilling to provide materials, rearrange schedules, eliminate preoccupation with quiet classrooms, and so on. A teacher does, however, adopt "different" procedures when they do not go beyond his classroom; when what he does in no way affects the practice of others. This is easily accomplished by single subject matter teacher, or by some teachers of self-contained elementary classrooms.

Do Rogers and Shoemaker allow for the role of the subordinate as an initiator of innovation adoption? Subordination as a factor in change is not truly their concern. While they do take into account that some innovations require adoption procedures involving groups, they do not treat groups - even organizational components - as adopters. The decision to adopt an innovation may be made by a collective <u>process</u> but, ultimately, the application (implementation) is an individual matter. Whether an individual is likely to attempt or continue application of an innovation appears to Rogers and Shoemaker to be related to the means used in arriving at the decision -

*Rogers and Shoemaker's situational conditions which encourage the adoption of innovation consist chiefly of free communication channels and the evident qualities of the innovation.

i.e., whether it was collectively made, made by authority - however, Rogers and Shoemaker do not emphasize this point. Whatever decision process is used they affirm, will depend for effectiveness on the degree of communication and the communication mechanism among individuals and between management and employees. This latter requisite is essential. As Rogers and Shoemaker state, "The degree of communication integration in a social system is positively related to the rate of innovation."

Yet, given the appropriate communication channels, and some other requisites for adoption decisions to be successful, the crucial variables - according to Rogers and Shoemaker - are individual variables. As a further illustration of this position, it is noted here that Rogers and Shoemaker have compiled quite a large number of adopter characteristics. (These may be surveyed in detail in their Appendix). A few of the more general--and, for educational institutions, useful--and significant characteristics are: earlier adopters have more years of education, higher social status, greater rationality and intelligence, greater exposure to interpersonal communication channels than later adopters.

It might be supposed then that if employers had some way to measure prospective employees for these characteristics, the employer could merely choose those people likely to be innovation adopters or reject those who are unlikely to favor change - assuming the employer favored change. Would that it were so simple! That the tools for measuring such characteristics are of dubious reliability is only one of the obstacles to such an approach. While such vaguely proffered organizational-level conditions as "effective communication channels" may somehow be achieved, Rogers and Shoemaker ultimately rely on even slipperier qualifications: antecedent conditions in the individual, e.g., "(1) the individual's personality characteristics, such as his general attitude toward change, (2) his social characteristics, such as his cosmopoliteness, and (3) the strength of his perceived need of the innovation." (p. 103)

Rogers and Shoemaker's reliance on the individual as the location of the decision to adopt an innovation is a fundamental weakness weakness in their theory if one is concerned with organizational change. They state:

> The theme developed throughout this book is: Communication is essential for social change [and, one may infer, for organizational change]. The process of social change consists of three sequential steps: (1) invention, (2) diffusion, (3) consequences... Consequences are the changes that occur within a social system as a result of the adoption or rejection of [the] innovation. Change occurs when a new idea's use or rejection has an effect. Social change is therefore an effect of communication. (pp. 6-7)

Such a statement leaves out the organizational aspects of innovative adoption: if the diffusion process, for instance, requires change agents, participatory strategies for initiating innovative adoption, and the like, these are for R & S, required to persuade the individual that change is necessary, that the change at hand is the most appropriate change, and that adoption of that change by the individual will bring about the needed organizational change. It is because of their belief in this sequence of events that R & S make the statement that "an aggregation of a multitude of individual changes produces a system-level alteration."

But such a position fails to adequately take into account the difficulties which may be encountered by those who attempt to implement an innovation, it is predicated on adoption as an individual event* and linkages of individuals, makes it appear that the individual is alone and free to decide to accept or reject an innovation. Can an individual make such decisions in an organization? If so, what kind? (Rogers and Shoemaker concede only possibilities: "System effects may be as important in explaining individual innovativeness as such individual character as education, cosmopoliteness, and so on.")

However, Rogers and Shoemaker can see no further than the individual in any direction; consequently, if it must be acknowledged that individuals are not free to make adoption decisions, then this must be so because another individual ("someone with more authority in the social system") forced him to accept a decision. (Rogers and Shoemaker's generalizations about the diminished effectiveness of authority-decision does not deter them from taking this lead-a-horse-to-water-and-make-him-drink position.) But it is known from empirical research that it is precisely the organizational arrangements which accord the authority and lack of authority that result in some educational innovations being adopted and implemented and others being rejected

*Ginzberg and Reilly, Effecting Change in Large Organizations, p. 131.

or frustrated. Yet these organizational arrangements are not treated as being of paramount importance by Rogers and Shoemaker. Individuals do have roles in organizations or social systems and can support or impede change. However, Rogers and Shoemaker rest their strategy of change almost wholly on the individual as the organizational influence.

As Chin and Benne point out*, the fallacy of the above position is that getting a more intelligent or more flexible individual to do a job does not increase job effectiveness. If the organization does not permit individual intelligence or flexibility to operate, the job will change its holder.

Evidently, then, Rogers and Shoemaker's concern with the individual almost to the exclusion of organizational analysis is not an adequate approach to the question of organizational change. Appropriately, one of the latter generalizations made by Rogers and Shoemaker leads from the point they leave off into the primary concern:

> An organization will be quite enthusiastic about innovation adoption by individuals as long as innovation is limited to improving the function or efficiency of the existing organization, whereas it tends to resist reconstructive changes."

Rogers and Shoemaker considered organizations to be merely a collection of individuals, recognizing the deliberateness of formal organizations, (pp. 303-304 from Blau and Scott) but failing to recognize the importance of the <u>interrelatedness</u> of the individuals as <u>members of organizations</u>. Thus, the major shortcoming is the lack of <u>organization-level</u> strategies to promote innovation adoption.

Rogers and Shoemaker's failure to deal with the organization-level aspects of innovation also leave intact and unexamined the hierarchical arrangement of management/subordinates. As the literature on leadership indicates, particular sorts of <u>organizational</u> arrangement promote an atmosphere in which innovation is encouraged. Such structural arrangements

* "General Strategies for Effecting Changes in Human Systems," p. 36; in Bennis, Benne and Chin, <u>The Planning of Change</u>, Second Edition, New York: Holt, Rinehart and Winston, 1969.

are the consequence of types of leadership, manner of appointment of management (superintendents), organizational relations between groups and individuals. Also important seems to be the extent to which management and employees share the organizational goals, a sharing facilitated by certain organizational arrangements.

It is at this point that Gross et al.* begin their study of implementation by ignoring the individual and focusing on the organization - the person as a member of an organization, with an organization function and role. From the first, Gross concerns himself with the organization: there is no definition of innovation, but there is organizational innovation. "Organizational innovation shall be used to refer to any proposed idea, or set of ideas, about how the organizational behavior of members should be changed in order to resolve problems of the organization or to improve its performance." (p. 16) Gross proposes to use organizational innovation and organizational change interchangeably. "We view organizational change as behavioral change with reference to role performance, the authority structure, the division of labor, or the goals of an organization." (p. 15)

Gross asserts that his concern is with the ways in which an organization qua organization can adopt innovations and not with the adoption of innovation by individuals. He begins by examining the evidence for claims made that whenever organizational change is attempted, (the attempt to get an innovation adopted) there is an initial resistance to be overcome. He states:

> We would contend that in many organizations the empirical reality is that a number of their members are exposed to irritating problems and needless strain, and consquently would welcome innovations that appeared to offer solutions to their difficulties. (p. 204)**

*op. cit.

**Compare the position taken by Donald Klein, "Some Notes on the Dynamics of Resistance to Change: The Defender Role," in The Planning of Change, op. cit.

Gross's position is that this claim is an assumption which is not supported by the evidence available. Further, in assuming the validity of the claim, strategies of change and studies of attempts at change have focused on this initial phase of the process - namely, the adoption of the innovation - but have failed to treat what Gross considers the crucial phase: the attempt to implement the innovation. Gross's study offers little consideration of the process by which a particular innovation comes to be chosen for implementation.* Instead, he attempts to focus on the organization itself as it attempts to implement innovation.

Gross defines formal organization as "rationally contrived, deliberately designed, and goal oriented social systems that organizes individuals in a formalized authority structure and in a division of labor that links members to one another as occupants of interrelated positions." (p.15) As the organization, (i.e., the members joined by goal and by function,) seeks to implement any innovation, Gross asks what forces and conditions impede or prevent that implementation. If such are found, then what conditions would promote implementation of change. These forces or conditions are expected, then, to be elements of the organizational structure; they are social and systemic, and not individual.

Gross substantiates his position through a case study of an attempt to implement a particular innovation (the catalytic role model for teachers) in an elementary school. As the case study is presented, Gross examines the procedure for information on the nature of the desired change:

> One of our basic reservations about the "resistance to change" explanation was that it ignores the whole question of barriers that may be encountered by members of organizations in their efforts to carry out innovations.
>
> Our findings showed that the failure to implement the innovation was attributable essentially to a number of obstacles that the teachers encountered when they attempted to carry it out that were never removed. What were these barriers that were of critical importance in accounting for the failure of the implementation effort we studied, but that existing conceptual schemes disregard? (p.196)

*The process of initiation may be most important in determining successful adoption. For example, see Robert Chin, Kenneth D. Benne, "General Strategies for Effecting Change in Human Systems," in The Planning of Change.

The barriers found were: (1) teachers' lack of clarity about the new role model, (2) their lack of needed skills and knowledge - or capability, (3) the unavailability of required instructional materials and equipment, (4) the incompatibility of existing organizational arrangements with the innovation.* (5) lack of staff motivation and administration failure to recognize and cope effectively with problems teachers encountered when trying to make the change, as well as lack of communication and understanding within management itself. (pp 196-8; 200-1)

In attempting to explain the negative effect of these conditions, Gross cites two deficiencies in management: (1) it failed to take into account difficulties to which teachers would probably be exposed when they attempted to implement the innovation, and (2) it contained no provisions for feedback mechanisms to identify and cope with barriers and problems, arising during the period of attempted implementation. (p. 201)

Gross continues:

> This suggests that subordinates may be unable, or find it difficult to make changes in their role performance unless management conforms to a set of expectations that subordinates have a right to hold for its performance. More specifically, subordinates have a right to expect management (1) to take the steps necessary to provide them with a clear picture of their new role requirements; (2) to adjust organizational arrangements to make them compatible with the innovation; (3) to provide subordinates with necessary retraining experiences, required if the capabilities for coping with the difficulties of implementing the innovation are to develop; (4) to provide the resources necessary to carry out the innovation; and (5) to provide the appropriate supports and rewards to maintain subordinates' willingness to make implementation efforts (p.201) ... Only management has the power to make changes in organizational arrangements that are incompatible with the innovation. (p. 203)

There are at least two reasons why the attribution of failure to management is inconsistent with the remainder of Gross's position. (1) Management is not always responsive to what may be the rights of subordinates. Where the circumstances include an obdurate management, there is no strategy offered by Gross to change management's mind.

* One might suppose that the elimination of such organizational features could be considered an innovation in itself. It may be asked why these "incompatibilities" were not ameliorated - or more appropriately, how they might be removed. Without an answer to this, the examination of change seems only to have been postponed by a step. (Is this the only condition which could strictly be referred to as organizational?)

(2) In placing the responsibility for failure with the school management, and by limiting his study to the implementation stage of the innovation adoption process (and by excluding the initiation stage) Gross reveals an unfortunately well-illustrated oversight. Teachers, because they are directly responsible for carrying out programs and can observe and respond to the consequences of educational innovation, are in the best position to improve the quality of educational experience for students by initiating innovation adoption. However, they rarely do so. Is this because of the organizational of weakeness school system as shown in Gross' case study? On the problems of implementing change initiated - or even proposed - by subordinates, (e.g., what sources of support for change other than the administration exist for teachers) Gross is silent.

Gross faults those authors who claim that active subordinate participation if not initiation is necessary for maximizing the likelihood of acceptance of an innovation and for continued support for implementation over time. It is his claim that such authors base their conclusions on "personal experience, logical argument, or the findings of a few empirical studies." (p.26) As the first two of these are dismissed out of hand by Gross, his demolition attempt is on two relatively early studies (Morse-Reimer, 1955, Coch-French, 1958), presumably "few empirical studies" causing so much error. Gross sites as allies for his doubt two other studies (Leavitt, 1965; Hertzberg, Mausner, Snyderman, 1959). Not much empirical evidence to the contrary of the power-equalization position! Further, Gross concludes:

> Even if participation were shown to be effective, it is problematic whether subordinates have the knowledge, competence, or the desire to make major decisions about important organizational changes. (p.29)

It is characteristic of Gross throughout the book to use the term "subordinate" when referring to teachers without raising the question of the propriety of bureaucratic, hierarchical relationships in an organization where all members consider themselves professionals. He does not consider the organizational ramifications of such issues as teacher organization - a strategy which may, finally, prove efficacious in creating the organizational conditions necessary for increased adoption of innovations.

The limitations established by the organization of American schools and their vertical integration* would seem to restrict change in schools, or the adoption of innovations, to those innovations which are non-reconstructive (i.e., which do not require changes in role, etc.). Preceding this conclusion is the premise that an innovation is considered and eventually adopted or rejected on the basis of its merits. There are some authors who take this position; namely, Marsh**, Rogers and Shoemaker*** (to the extent that an individual is claimed to adopt an innovation because it is perceived to be new to the individual and his circumstances, and he is able to proceed through the phases described by Rogers and Shoemaker as integral to the adoption process). There are other authors whose position appears counterposed to the one just described; their position is that an innovation is almost never adopted because of its merits but because of organizational politics, convenience, or public relations; or because of "characteristics of the local system, of the innovating person or group" and so on. Miles****, Lippitt*****, and Carlson****** are authors taking the latter position. There is, then, this controversy to consider in studying innovation adoption: that some authors claim the nature of the innovation is crucial to its adoption, while other authors claim the innovation itself is less important than the organizational position of the adopter, his or her personality characteristics, local politics, and so on.

One possible resolution of this apparent controversy is a synthesis of the several positions. As in the dichotomy between organization and individual discussed in examining Gross, and Rogers and Shoemaker, one may realize that neither position can account for the total process of innovation. Rather, each has focussed on one aspect of the innovation process considered to be pre-emptive. In order to adequately apply their hypotheses about innovation adoption, however, it must be noted that the positions, while seeming to be counterposed, are actually facets of a single process; each is necessary; alone, neither is sufficient.

*Sloan R. Wayland, "Structural features of American schools as a factor in innovation," in Innovation in Education, Matthew B. Miles, ed., Teachers College Press, 1964.
**Paul E. Marsh, "Wellsprings of strategy: considerations affecting innovations by the PSSC," in Innovation in Education, p. 249 ff.
*** Op. Cit., passim.
****Matthew B. Miles, "Innovation in education: some generalizations," in Innovation in Education, p. 631 ff.
*****Ronald Lippitt, Jeanne Watson, Bruce Westley, The Dynamics of Planned Change, Harcourt, Brace & World, Inc.; N.Y.: 1958.
******Richard O. Carlson, Adoption of Educational Innovations, Center for the Advanced Study of Educational Administration; Eugene, Oregon: 1965.

Rogers and Shoemaker attempt to offer some explanation -- or description-- of why a person may perceive a technique or strategy as innovative. Carlson attempts to explicate which people in which locales, will be adoptors. Gross deals with the organizational conditions which are considered to be necessary for innovations to be adopted. However, Carlson cannot explain which of several competing innovations might be adopted. Gross cannot explain when (even given his necessary conditions) an innovation will be adopted.

Perhaps some preliminary generalizations are now possible. Rogers and Shoemaker focus their attention on innovation adoptors as individuals. Yet, it is possible to speak of these individuals collectively, at least for purposes of discussion. However, they must not be considered to be a group; rather, they are to be seen as a category of persons. This distinction is helpful because, while an innovation may be multiply adopted or rejected by some number of, say, farmers, this is nonetheless an aggregation of individual adoption or rejection decisions; it is not a decision by a group or an organization to adopt or reject that innovation. The decisions are individual decisions, the innovation utilizing unit is the individual. Rogers and Shoemaker are sometimes unclear in their treatment of innovation adoption because they fail to maintain in their writing the distinction between several decisions for multiple adoptions of an innovation (adoption by a category of persons), and a group decision or a decision made by an organization with a single spokesman to adopt an innovation. The decisions made by a member of a category of adoptors may or may not affect other members of that category. A decision made by a group or by an organization, by definition, affects all members of that group or organization. The social structure thus plays a significant and inescapable role in the nature of an innovation adoption decision, and also in the success or failure of the implementation of such a decision.

When an individual decides to adopt an innovation, he has, presumably already proceeded through the phases of assessing the innovation, comparing it or its consequences with his existing manner of operating, and

deciding on the means of implementation. When an organization considers adopting an innovation, there is some unclarity about just who is doing the considering. Depending on which postulates in the literature one accepts concerning the sources of change,* one will support the management or the administration of an organization or school as the appropriate persons for discovering and seeking to implement innovations; or one will favor those persons who find themselves in an organizational predicament as the most appropriate persons to recognize that a change is necessary and to figure out an innovative means of affecting such change as seems required (cf. Shephard, 1967), or one will favor use of an external change agent in some combination with management and subordinates.

But whether one or the other of these groups initiates the adoption of innovation is largely contextually determined. That is, if an administrator/in a school system is appointed from without that system he is more likely to use his position to effect change (Carlson, 1962), and his is the best organizational position for the initiation of change (Gross, 1971)** However, successful innovation adoption will not occur solely as the result of legislated, authority decisions (Rogers and Shoemaker, 1971). While the need for participation in decision-making by those directly affected by the implementation process has been questioned (Gross, 1971), some authors have insisted such participation is a necessity (Benne and Birnbaum, 1960). Other authors have stressed that the source of the innovative idea itself comes from those familiar with the situation to which the idea would apply (Shephard, 1967) and the difficulty lies, therefore, in implementing --i.e., in securing administrative support, or at least in avoiding administrative rejection.

*Among these postulates are the following: (1) that management is in the best position to initiate and to implement change because of its overview of organizational needs and because of its power --Cf., Gross, Carlson, Lippitt, Brickell; (2) the initiation of change, at least in the form of participation in early decision-making in the process of adoption, must be by those affected directly by the implementatimn of the innovation ---Cf., Benne, Bennis, Marsh, Chadwick and Anderson; (3) that external change agents are necessary for initiation and implementation of change --Cf., Ferguson, Miles, et al, Argyris.

**"In stable groups especially it is the marginal or atypical person who is apt to be receptive to new ideas and practices or who is in a position where he can economically or socially afford to run the risk of failure." Dr. Klein, op. cit.

There are some conditions, or strategies, discussed in the literature on organizational change as being efficacious in effecting administrative or subordinate acceptance of an innovation (or in minimizing the possiblity of rejection). As was mentioned above, one of the features of an organization that seems to bear on the liklihood of its having a change orientation is the manner in which the administrator is appointed; that is endowed with power. (Cf., Bidwell, Carlson) For instance, if the administrator is brought in as a stranger from outside the organization but from the appropriate rank order, he is apparently freer to exercise his desire for change, and he is more likely to receive the support of the school board (unless he falls a victim to internal factionalism).

Another aspect of circumstances likely to promote openness to change is the geographic proximity, or possibility of first-hand contact, between those who have already adopted an innovation and those whose inclination appears to be toward the adoption of that same innovation. (Marsh, 1964) Carlson also notes that prestige links more potency to high status adopters.

The innovation itself must manifest certain characteristics before it will be considered for adoption.* These innovation characteristics are necessary but they are not sufficient; i.e., without these characteristics it is unlikely that the innovation would be considered, with these characteristics, the innovation's adoption or rejection must then "fit" existing features of the organization. These organizational features determine which strategy will be chosen based in turn on the belief system that that strategy will lead to the desired results. Belief systems are relevant to organizational receptivity to innovations, but these beliefs may derive from ignorance, local mores, or political expediencies. Board decisions regarding various strategies for school desegregation which might involve innovation practices are a case in point.

Still another strategy for using a new or innovative idea within an organization is simply to <u>conceal</u> its existence from the management or administration. (Shephard, 1967). Concealment may enable the implementation of an innovation presumed offensive to the administration. However, it is doubtful whether an innovation which, during its implementation, can be

*Cf. p. 2 above.

easily concealed, can be of much significance to organizational functioning. Further, this strategy is of limited value in a system small enough for each teacher's activity to be highly visible. One may ask whether a locally meliorative activity is to be considered an innovation. If it is perceived as such by its adoptors but once out in the open no reaction occurs, how is such a step to be percieved? Must organizational resistance occur coterminously with or subsequent to the implementation of an innovation?

In so far as the nature of an organization is defined as steady-state, status maintaining, unchanging (Watson, 1969; Klein, 1969), to that extent the existence of a more democratic leadership --i.e., one encouraging upward communication and participation in decision-making -- is itself innovative. Such leadership will be more likely to encourage organizational flexibility and to maintain organizational integrity (Klein, 1969) and functioning by incorporating within the regular and standardized roles some effective means of keeping in touch with the daily operations and the responses of employees to those operations. A characteristic of such management is its view of the organization as an open system (Griffiths, 1964), requiring change of some sort at regular intervals to preserve organizational health. Organizational health (Miles, 1965; Clark, 1969)--i.e., establishing flexibility of those features of the organization which transcend and endure beyond the particular or current individual employees-- is promoted specifically through the use of a mechanism such as the "survey feedback" described by Miles and his colleagues.* Such mechanisms allow management to open channels of communication, to keep in touch with subordinates and to oversee adjustments and changes as a result. Knowing what frictions exist as employees assume their organizational role provides management with the possibility of using additional strategies for ensuring smoother adoptions or necessary innovations. For instance, when an innovation is introduced, management may utilize the strategy of employing external change agents.

*Matthew B. Miles, et al., "The Consequence of Survey Feedback: Theory and Evaluation," in The Planning of Change, op. cit., pp. 457-468.

Change agents themselves constitute a special and deliberate strategy of change. Their skills in providing easy initiation, supportive maintenance, and linking of innovation to existing procedures and of staff harmony are valuable whether a subordinate or manager is the source of the impetus to change. (Lippitt, 1958; Rogers and Shoemaker, 1971; Chin and Benne, 1969; Ferguson, 1969; Argyris, 1969 ; See also Alinsky in Rochester)

At times, resistance to change may be either the cause or the consequence of conflict between management and employees such that a "structural" strategy is more effective than the efforts of change agents. In such cases, temporary systems of various sorts may prove most efficacious. (Miles, 1964)

Temporary systems may be used within organizations to provide a variety of important functions. As well, temporary systems may be established to effectively operate between organizations to provide a smooth interface. Temporary systems can range from a management seminar on dealing with problem employees to a project established as a demonstration of an experimental educational innovation. Thus, for something to be established as a temporary system by an institution or an organization does not mean necessarily that it will remain integral to that institution or that organization. In fact, the temporary system itself is neutral (as are all of the strategies which will be dealt with in this review). Within organizations, temporary systems provide useful and/or necessary conditions: they afford the participants the opportunity to take risks - whether personal or on behalf of an organization - which he or she would otherwise be reluctant to take. In the temporary situation it is clear that the consequences will be short lived. Also, tasks are apt to be more sharply focused and assumption of responsibility is more personal; there is little or no anonymity or impersonality as in the larger setting. Further, the power structure of a temporary system is less concentrated, it is diffused to all of the members of the group. Errors are contained within a small space, but success can be exploited.

So far, the strategies considered have dealt with the problem of resistance of one sort or another once an innovation or change is proposed and adopted. But what of the organization that is about to consider an innovative solution to an existing problem; is there any foreseeable difficulty which might be countered through the use of a strategy? Many organizations are not prepared to spend money in order to discover what alternatives exist to the solution of a problem. Experimenting with different models is expensive. School system budgets rarely include money for change and none for experimentation, and many have barely enough to operate existing programs. Therefore, the introduction of money from an outside source into an organization or a school system in order to plan for innovation would be especially effective in affording that institution flexibility that did not previously obtain. (Bessent and Moore, 1967) In addition to flexibility, an allied advantage of available funds at the planning stage of innovation adoption is the autonomy such funds provide: the decision to adopt one innovation over another does not then depend solely on the relative cost of the innovation but can be decided on the basis of its merits and its appropriateness as perceived by those in a position to be affected by its adoption. That is to say, that, at least in this phase of the adoption process, the support of management is not crucial. However, within an organization, and within the group actually being funded, it must be made clear that money allocated for planning purposes is not to be spent in any other way.

If the teacher were again, as in the early days of this country's history, to teach on his own - to develop all curricula, both in plan and material; to assist in constructing the very school house; to be completely responsible for every aspect of the operation of the school as his own enterprise - then it might make sense to talk of a teacher as an autonomous actor who is free to become familiar with, to evaluate, and to accept or reject an innovation. That time, and that autonomous teacher, have become history. Save for the ambitious advocates of teacher organization, such as Lieberman (Future of Public Schools), Corwin (Militant Professionalism), and

Arnstine (ASCD Yearbook, 1971), teacher activity must be considered today no more nor less than the activity of any employee of an organization: a teacher is a subordinate in a bureaucratic hierarchy, with limited responsibility, restricted decision making, and low professional status. Whether such an arrangement should be so is a separate question from, say, whether teachers can individually adopt innovations. That a case can be made to perpetuate the concept of school teaching as a "professional" career, modeled for example on the "professor", does not mean that such a case can be accepted or should be. The positions taken so far seem predicated on a few specific features of the teaching activity, disregarding - or only implying - other important features.

It is seemingly more for reasons of supplementing the material circumstances of teachers than to initiate a change in the role of teachers in the school organization that these authors advocate the organization of teachers. If teachers lack adequate financial compensation, however, it is partly due to the position they hold in the school organization; a position also lacking power in the organization to initiate change of any significant sort.

It is important in any examination of the possibility of one group in an organization being able to initiate change to have, first, a clear understanding of what would constitute change if one found it. That is, what would one accept as change and what would one accept as an instance of innovation? Is it significant to ask such questions as whether teachers should have the authority to adopt for themselves such innovations as team teaching arrangements, open classrooms, or non-graded classes? What makes such a question significant is that it points out the dependency of teachers on the school administration for the support necessary - financial, material, time support - to attempt the adoption of such innovations. Why should the mere adoption of such innovations cause any difficulty in the relations between school faculty and the school administration? The reason would appear to be that there are some innovations that, once adopted, cause reconstructive changes in the organization itself. Since it is the administration of a school system that is responsible for the maintenance of the integrity of the

organization, any attempt to alter the organizational structure may not meet with unalloyed enthusiasm. Whether efforts to change, or to adopt innovations, meet with resistance depends on how the attempt to innovate is made. The literature on organizational change does mention some strategies that have been employed to help overcome such resistance should it be met.

However, after the strategies themselves are discussed and before one can assess them for efficacy, it seems important to give some consideration to the structure of the schools, lest an inaccurate perspective on the possibility of change be formed; i.e., lest one become unrealistically optimistic. In his article, "Structural features of American education as basic factors in innovation," Sloan R. Wayland presents a description of the American schools that is not at all encouraging when one considers the possibility of change. Wayland points out that the schools are implicated in a web of ancillary structures, such as publishers, professional organizations and so on, which have a variety of vested interests in the maintenance of the present manner of operating. These ancillary structures are outside of, and in addition to, the complexities of the bureaucratic structure of a school system itself. Schools are also integrated in function with respect to the efforts of elementary and secondary schools organized to present material and socialize students in ways that accord with the requirements of the colleges, and the colleges likewise are organized to accommodate the demands of the graduate and professional schools. To further compound this vertical integration, there is the emphasis placed on the uniformity of knowledge and procedure by academics; teachers who teach the teachers of the lower schools. Thus, the values of the graduate schools, in the manner of teaching, will be transferred downward as those who wish to teach in the public schools take their professional training from those at the universities. More, the individual local schools are prevented from attempting to modify their teaching style or material because of the de facto standardization of the educational process, a standardization evidenced in national recruitment of teachers, movement of students from school to school, national market for instructional materials, and national examination systems. With such a web of structural features, it is difficult to expect any change to be possible in the schools.

But, if it were at all possible to initiate change in the schools, where would it seem likely to begin? Is it reasonable to believe that those who are organizationally responsible for maintaining the status quo of the schools would ever find it attractive to encourage the initiation of change? Even if questions of authority in local schools were to be resolved, and if it were to be reapportioned in a manner that gave power to change to, say, superintendents - a claim is often made in the literature that in fact superintendents already are the locus of change authority (cf., Bidwell, Carlson, Gross, Rogers and Shoemaker) - would it be feasible for superintendents to attempt to exercise such authority given the evidence offered by such authors as Wayland, that local school and school district autonomy is mythological?

Consideration of the nature of the goals to be achieved by a particular school or project is crucial for answering whether some of these sorts of activities ought to be exclusively delegated to or assumed by teachers or directors when opportunity arises for potential redistribution of such activities.

To sum up, we have reviewed the literature on leadership and organizational change and identified the major controversy in the study of innovation adoption; some students claim that the nature of an innovation is critical to its adoption, while others maintain that the innovation itself is less important than certain contextual features such as the organizational position of the adopter, his personality characteristics, local politics, and so on. Neither position alone can account for the total process of innovation, and so we have proposed a synthesis of the two. Some key strategies in this view of the change process are: concealment, use of a project as a temporary system, use of special change agents, participation by subordinates, and use of feedback mechanisms. In the next section, we note the presence or absence of these strategies and others in the case study projects, for a contrasting background to the discussion of overall USOE change strategies which follows.

Change Strategies Employed by Case Study Projects: An Overview

In the literature and in OE's programming, we have identified a number of key assumptions about effective change strategies and the nature of the change process. In what manner do the case studies support or oppose these assumptions, and what new light do they shed on the process of institutional change? While this is a subject to be explored in detail later in the report, a brief presentation of some of our findings may be useful here.

To begin with, almost without exception the directors of the projects studied were appointed, selected, or promoted to their position from within the organization which sponsors or hosts the project. In some instances there are co-directors. In others there are directors who also are on staffs of organizations (such as universities) other than the project itself. In each case, in contrast to the literature, the person responsible for initiating change is a person whose values, perspective, and routine reflect his membership in the organization which is to accept change, rather than the one which is to make the change.

The predominant source of trainees for the projects is from within the LEA or IHE systems. While the literature does not offer convincing evidence that such persons resist change, one might hypothesize that persons whose values and routines are the result of experience with the system considering change would be less receptive to change -- having more invested in the status quo -- than persons whose roles are more marginal with respect to that same institution or system. Not more than half of the sites attempted to seek trainees who did not "fit" the existing system.

Let us now consider the strategy of the project establishing exchanges or working relationships with the host institution (IHE), so that that environment (refer to the discussion by Griffiths on open systems characteristics) could promote and facilitate the required changes. Some projects did attempt to win a place in the institutional network, through such means as recruiting faculty from different departments. Yet some projects were initiated by LEA's themselves, and those LEA's were not always amenable to seeking assistance from IHE's. Other projects were initiated by state or local

agencies which did attempt to meet the needs of the LEA's, but lacked a clear conception of what exactly those needs were, and did not attempt to establish any viable means for discovering those needs. In a few instances, the projects were intended to foster internal institutional harmony within an IHE, without regard to any LEA.

Attempts by LEA's and projects to utilize the resources of the local IHE had the following results. Even with close cooperation between project and LEA, often a project was isolated from any possibility of affecting the IHE. That is, facilities, faculty, money, training, and degrees were shared -- but the exchange was from IHE to LEA, without any reciprocal action. The project was effectively prevented from changing the operation, goals, attitudes, or material resources of the IHE -- even when this seemed a necessary step towards making the IHE and LEA more in accord and sensitive to each other's activites, problems, and requirements. In a few projects, the graduates were to have been eligible for entrance into the IHE's regular, continuing program. However, not every case indicates that all such graduates were willingly admitted by the IHE's. In effect, the projects were kept at arm's length from the IHE.

Concerning the strategy of concealment, only two of the cases could be characterized as employing such techniques. These both involved softening the impact of the project on the IHE by compromises. In one instance, the compromise was on the rubric under which the project's aims would be classified: from focusing on "minority" problems, to "urban" problems. In the other instance, the change was procedural: from training teachers to be deliberate change agents to performing the usual teaching duties with exceptional competence. By so transforming the projects, the IHE's remained intact while proclaiming the continuation of the projects.

The discussion in the literature review indicated the several ways in which temporary systems could be used by an organization. In more than half the sites studied, the project was effectively a temporary system for the IHE in the sense that the project provided an opportunity for the IHE to demonstrate or study something for a limited time and with a limited commitment of resources. In one instance, the IHE used the project as an occasion

to transfer their own problems to the project and reduce them to manageable size.

We found almost no evidence that the projects or the IHEs employed professional change agents to facilitate interfacing of the project with the IHE or the LEA. It is true, of course, that the literature on organizational change sometimes considers professors acting in the capacity of advisors as change agents. However, we were concerned to see not only whether consultative activities were employed in some way, but also whether persons of professional standing as change agents were invited into the situation when difficulties arose. In a single case, the IHE was using the trainees of the project as instruments of change for purposes of renewing its own perspective and interaction with both the LEA and the community environment.

The use of the practicum varied considerably, the extremes being minimal use of such training (this was typical of projects requiring much course work from the trainees), to extensive use of actual circumstances for training purposes. It would seem, from the perspective of the literature on innovation adoption and organizational change, that the greater the number of opportunities for a person to attempt new behavior under actual but supervised circumstances, the higher would be the probability of his understanding what is expected of him, and his familiarity with the situation facilitating flexibility of response. (He does not have to cope simultaneously with new role expectations and exigent occurrences.)

Less than half the projects studied were organized to provide for participation in decision-making by those affected by the project or by the innovation being adopted. That is, most of the projects were established and operated by administrative authority or fiat. Those involved in the operation of the project were expected to be subordinate to those in the administration -- even though, in some projects, the trainees were principals of schools. While some projects had representatives from the project on an advisory board which governed that project, the presence of a representative on a board does not in any way guarantee that the representative will be listened to. Those in the position of operating the project from day to day were in an excellent position to sabotage the project by refusing to obey decisions in which they

had no part, and did refuse on occasion.

The authority structure of most projects was such that decision making was solely the prerogative of the administration, whether of the IHE or of the project. Yet the literature suggests the importance of establishing some means to monitor responses to and effects of administrative decisions on those in the projects; i.e., to establish feedback provision of some sort. At least two IHE's tried such feedback channels. One IHE attempted to use the trainees of the project to provide information from the LEA's and from the community. The other IHE made an apparently unsuccessful attempt to assess the impact of the sponsored project on the community. Beyond these two attempts, there is no indication of the deliberate employment of communication channels or survey feedback or any other new (not existing before the establishment of the project) technique or device to ensure awareness of the feelings of project staff, participants, LEA's, or communities.

Resources for Strategy Direction within the U. S. Office of Education

Having reviewed both the literature and the case studies for change strategies which appear central to the process of change, we are now in a position to appreciate the importance of certain basic assumptions of the Office of Education in designing the programs which the projects represent. OE was, and remains, concerned with institutional change in educational systems, in schools, colleges, and universities. It was, and again remains, interested and concerned in forms of interinstitutional cooperation, ways of bringing institutions together to deal with mutual and overlapping problems: training, staff development, implementation of new programs, and administration. The projects were designed to be interinstitutional because it was believed that, in concert, institutions could change other institutions, and, in the process, be changed themselves. It was also believed that such change could foster educational innovation in the classroom and, ultimately, improve children's learning in the schools. There were, at least, the assumptions of the Office of Education and of the policy makers who framed the original programs authorized by the Education Professions Development Act. To an extent they reflect the literature on educational change, but to a greater extent they represent the "accepted wisdom" of professional educators. It is not a critical judgment to say that these programs did not evolve from a unified theory; they did not suggest how such a theory might be modeled; they did not suggest evaluative criteria on which projects might be assessed; they did not illustrate or recognize a concerted or strategic planning process.

Throughout this report we will have occasion to note how different each of the projects are. These differences do not reflect planned variations. Instead, they reflect different moods, styles, approaches, or what might be called strategies of different actors who influence decisions made in the field. So many actors participate in the differentiation process that this study cannot hope to account for all the variables which influence a project's ultimate impact. Rather, the study is intended to shed some light on the general classes of strategic choice available to project and program planners at several levels. These classes or categories of strategies can form the bases of a model or models for educational change through different institutions and institutional arrangements.

The need to develop such categories of strategies stems from the goals and needs of policy planning at the national level. The overt goals of the Office of Education in planning these projects, or in aiding local planners to develop and implement projects, included the following dimensions:

(a) Improvement of instruction for targeted groups of school children.

(b) Improvement of the training or re-training of teachers and other school personnel dealing with targeted groups of children.

(c) Innovation in training and in training institutions to facilitate the improvement of training teachers and other educational personnel.

(d) Institutionalization of innovation in training institutions.

(e) Institutionalization of new roles, new styles, or new kinds of personnel in local schools.

(f) Developing new patterns of interinstitutional cooperation.

These overt goals reflect the broader agenda of OE planners in that they suggest that schools must change, that change will improve education for children, and that teachers and teacher training institutions must respond and participate in the overall change process.

Beyond these goals, the Office of Education was, and has always been, constrained by certain accepted strategic limitations. Some of these limitations reflect the economic, interpersonnel, and professional resources available to accomplish the goals. Some reflect the role of a national policy making and funding group in a highly decentralized educational system. Some reflect the hierarchical nature of the education profession with different loci of power in different institutions with different individuals. Some reflect the inherent limitations of educational change in the context of a changing society: how change in the educational system is limited or constrained by other changes or lack of changes in the broader social system. The Office of Education can only affect major change through levering limited, tactical, and almost idiosyncratic changes in different places at different times with different people. The difficulty of affecting an extremely large system through incrementally affecting many small parts of that system pervades all of the projects studied here, and most OE related studies of the change process in general.

Because different goals and constraints at field sites have resulted in such variety and apparent confusion, many OE projects, and the policy and planning groups in the program offices, appear to have moved increasingly to a pattern of regulation, enforcement, and monitoring for accountability. In the Office of Education this shift is evident in stronger, more detailed, and more rigidly enforced program guidelines. In projects primarily located in LEA's it is evident in increased localism and parochialism. Such a shift is also evident in evaluation, moving from global survey-oriented questions to idiosyncratic and parochial case studies.

An alternative to this approach, which may very well preclude any large scale educational impact, is to develop a conceptual scheme, examine projects by which that scheme may be expanded, enriched and verified, and then suggest strategies by which planning and further research may identify or influence those variables which seem most promising and productive. This study is an attempt to show the feasibility of such an alternative, in order to identify strategies and guidelines by which educational change on a broader dimension can be fostered.

We turn now to an application of these several concepts and assumptions to the specific issues of the present study. Each of the projects under study can be considered a source of pressure to change directed at two or more cooperating institutions: LEA, SEA, and the IHE or other training resources. The projects describe the nature of the change being sought and they state the strategies to be used to bring about the changes.

The projects vary along several possibly discrete dimensions.

1. The goals vary from providing services not now available to the LEA's but which are desired by them (these are significant services but not central to the institution in the sense that they represent a logical extension of the goals and structures presently operating), to providing teachers trained in the newer styles of instruction (whose skills might require a restructuring of the classroom processes now operating), to providing new educational personnel or re-trained personnel whose role would be the shifting of priorities and personnel utilization of the LEA's.

2. The training programs vary from requiring a wide range of university based faculty organized along non-traditional lines, providing instruction outside the usual course structure, and oriented toward the utilization of LEA-IHE structures which do not yet exist firmly (e.g., portal schools), to traditional, degree-granting programs utilizing traditional standards for admission and graduation, to workshop programs organized outside the framework of a university using few university facilities.

3. The practicum experiences vary from providing non-traditional roles for trainees to perform in the LEA's as part of their training in the dynamics of change agentry, to traditional student-teacher roles in the classroom, to specific practice of particular skills.

4. The centrality of the projects in the training institutions varies from integral to the IHE structure such that the project represents a process built into the normal functioning of the institution, to a more peripheral status involving selected faculty temporarily assigned to the project, to a structure separated from the normal functioning of the IHE, and involving little contribution from the IHE.

5. The organizational structure of the projects varies from being diffused in decision making, to involving a range of staff in decision making, to involving the trainees along with the staff in planning the goals and the strategies as part of the training inself.

Each project represents a highly idiosyncratic event, because of the uniqueness of every SEA, IHE and LEA. Our method is to look at each instance and distill the operational activities, and strategies employed to achieve them. Our goal, as we stated elsewhere, is not to measure the impact of each project, but to identify the patterns of institutional interrelation within projects which facilitated or constrained change. In the following section, these patterns are organized in a mapping sentence embodying our major hypotheses about the process of change.

Facet Analysis

One of the most important tasks of the present study is to organize and present the information contained in the case studies in some manner that is easily comprehensible and useful to educational planners and administrators. The technique of facet analysis provides a means of reducing data, using the raw materials of the case studies, as well as information obtained through a review of the literature and a review of OE's programming.

Facet analysis is a formalization of techniques used by researchers for years. The procedure was refined to its present state by Louis Guttman. In its "pure" form, facet analysis is a methodology for developing research hypotheses from a "mapping sentence." The procedure can and has been used for a variety of other purposes. For example, Guttman has used the technique of faceted definitions for making specifications of certain common concepts (such as "intelligence" or "attitude") more precise and readily accessible to investigation.* Facet analysis has also been used in instrument construction due to its ability to specify the potential item population for some measurement. Most notable among the users of this technique have been Dr. John Jordan of Michigan State University and his students.**

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* See, for example, Guttman's publications: "A Faceted Definition of Intelligence," Studies in Psychology, Scripta Hierosolymitana (1965) and "The Structure of the Interrelationships Among Intelligence Tests," Proceedings of the 1964 Invitational Conference on Testing Problems (1965).

** Some examples of dissertations written by Dr. Jordan's students include:

Hamersma, R.F., "Construction of an Attitude-Behavior Scale of Negroes and Whites Toward Each Other Using Guttman Facet Design and Analysis." (1969)

Kaple, J.M. "Development of an Attitude-Behavior Toward Drug Users Scale Employing Guttman Facet Design and Analysis."(1971)

Maierle, J.P., "An Application of Guttman Facet Analysis to Attitude Scale Construction: A Methodological Study." (1969)

In practice, although facet analysis was primarily conceived of as a hypothesis generation method, it is actually used more frequently for detailed, precise specification of the range and domain of a concept. Specifically, the mapping sentence presented below is a concise way of presenting a description of the possible range of educational personnel training programs. One may conceive of the facets as variables of some type derived from knowledge of the case studies. In fact, it is possible to draw an analogy between facet analysis and factor analysis. Both techniques take a large mass of data and reduce it to a smaller and more cognitively useful number of units. In factor analysis, one takes quantitative variables and reduces them to factors, each of which contains much more information than a single variable. Facet analysis uses the case studies as its source of raw data. The facets derived are more powerful and informationally useful than the prose of the studies themselves. Later in this report, we will compare the results of the factor analysis of project rating scales with the mapping sentence. It should be reemphasized than facet analysis is a non-quantitative procedure; there is no mathematics involved, only the judgement and perceptiveness of those constructing the mapping sentence.

Of course, the mapping sentence has implications for future research. When considered in the light of the findings of this study, the mapping sentence implies directions for additional investigations, both new directions not treated in this study and methods for further confirming (or denying) our findings. But the primary utility of facet analysis to the present problem is its definitional properties, of both the range of possible NCIES (and NCIES-like) educational personnel training programs and the domain of potential institutional impacts such projects may have. Also, the definition of the nature and context of each project in the case studies will provide educational planners who wish to generalize the findings to their own problems some basis for determining if the situations described in the case studies are at all comparable to their own.

All that is formally required of a definition is that it be clear. Facet analysis is a procedure by which a definition can be framed so that researchers

can be guided by it. A listing is made of the characteristics ("facets") of the entity that serve to distinguish it from other entities. A facet can, therefore, be conceptualized somewhat like a variable in the statistical sense. It has a range, either continuous or discrete, and is related to other facets of the same concept. These facets (enclosed in brackets) are strung together in a mapping sentence which defines the concept and, if it is appropriate, includes reference to causal relationships by means of arrows. Rather than present a hypothetical example of a mapping sentence, we will present examples of how one reads such a sentence in the following discussion of the actual mapping sentence that Abt Associates' case study staff has developed.

The mapping sentence will be composed of three large sections in the following very general form:

Projects of {TYPE}, given contexts of {TYPE} ⟶ institutional change of {TYPE}.

The full mapping sentence (to follow) expands on these three facets, labeled {TYPE}.

The first set of facets, those relating to project characteristics, can be thought of as independent variables in that they can be manipulated by either the Office of Education, the local project management or both. For example, OE guidelines will determine the nature of the project trainee and the areas of expertise this person will receive training in. OE can determine if a project will be rural or urban (through its funding decisions) and the project will refine general program level decisions into operations best suited to the specific needs it addresses.

The second set of facets, the "givens", can be conceptualized as something like covariates in experimental design. These facets concern characteristics of the participating institutions and communities that cannot be directly manipulated by the project but which will have some effect on the success of the project in causing change. This would include such things as the predisposition toward change of the IHE or how supportive or non-supportive of educational innovation the community is. Since these things are difficult to measure beforehand, funding decisions cannot easily be made with these data as inputs. Note that a highly successful project should also improve the attitudes of its host institutions. Consequently, the nature of a variable by itself does not determine whether it is dependent or independent. It is the

role of this variable (or facet) in any explanatory statement which does this.

The final set of facets concern the types of change that may result from such projects. These are analogous to dependent variables, and are the ultimate concern of OE and of local project managers. Change may be permanent or temporary, great or small, affecting the SEA, the LEA, the IHE, or the community. Change may occur in a variety of areas, such as curriculum in the schools, faculty staffing in the colleges, certification requirements in the SEA, and attitudes towards schools and teachers in the community.

By specifying these three types of facets -- independents, covariates, and dependents -- the mapping sentence diagrams the process of change evident in the case studies, and also in the literature and in OE's programming. It is, therefore, an appropriate conclusion and synthesis of this introductory chapter. The most salient hypotheses about the change process -- especially as they differ from the accepted wisdom of the past -- are isolated and discussed later in this report.

MAPPING SENTENCE

Projects funded at {dollar amount} for {less than one year / one year / more than one year} ;

with {0% : 100%} of funding from federal money;

{having / not having} the expectation of continued existence;

With the grant administratively located in a(n) {LEA / IHE / SEA / Intermediate district / comunity organization / non-profit corporation} ;

providing {pre-service / in-service / both kinds} training;

for positions as {paraprofessionals / teachers (general) / special subject teachers / administrators / counselors / teacher trainers} ;

for {number} of trainees;

who are {0% : 100%} {ethnic minority / low income / "high risk" / male / community residents} ;

with {great . . . no} experience in educational settings;

who have at least a { high school diploma / some college, no degree / Bachelor's degree / some graduate work, no degree / Master's degree / (no requirement) } ;

on entry;

with { no / some / all } practicum positions located in { one / . / . / . / many } ;

{ elementary schools / intermediate/junior high schools / secondary schools / community (2-yr.) colleges / universities / vocational-technical schools / educational administration offices / non-school settings } ;

located in { very large / . / . / very small } { urban / suburban / rural } { very affluent / . / . / very poor } ;

{ predominantly white / . / . / predominantly non-white } communities;

with { 0 / . / . / . / 40 } hours/week spent in practicum;

with { 0% . . . 100% } of the practicum spent working with

{ ethnic minority / non-English speaking / handicapped / underachieving } students;

with professional training provided by { one . . . many } { large . . . small } ;

{ predominantly white . . . predominantly non-white } { public / private, non-sectarian / private sectarian } { 2-year college / 4-year college / university }

with instruction consisting of { workshops / seminars / regular academic courses / laboratory work / modules / programmed instruction / other } ;

{ provided / not provided } by members of the College/department of Education of the IHE ;

leading to a { BA / MA / PhD / no degree } ;

that { does / does not } provide state professional certification;

GIVEN a { highly positive . . . highly negative } orientation of the { LEA / IHE / SEA / community } ;

toward { the specific goals of the project / educational innovation in general } ;

{ great . . . no } { permanent . . . temporary } change in the { curriculum / staffing pattern / classroom organization / administration / counseling program / attitudes of non-participant teachers } ;

of { one . . . many } school (s) in { one . . . all } participating LEA(s);

{ great . . . no } { permanent . . . temporary } change in the { degree requirement / curriculum / faculty staff pattern / student recruitment/admission policy / course contents / course offerings / non-participating faculty attitudes / community relationships } ;

of { one . . . many } { departments / Colleges / institutes } of { one . . . all } ;

participating IHE('s) ;

{ great . . . no } { permanent . . . temporary } change in the { professional certification requirements / types of certification offered / state personnel system } ;

of the SEA of the state in which the project was located;

{ great . . . no } { permanent . . . temporary } change in the { relations with / attitudes toward } ;

{ participating / non-participating } { local schools / teachers / IHEs } ;

of involved communities.

CHAPTER II

METHODOLOGY

A. INTRODUCTION

The present study represents one of the first applications of the case study methodology to large scale educational evaluation. While case studies have been widely used in both education research and other social sciences, they have not always been considered a "proper" methodology since they do not permit generalizations beyond the situation and actors described. Nevertheless, case studies do facilitate understanding of the dynamics of a situation much more easily than do other means. Given the changes anticipated in NCIES at the beginning of this study, a methodology that could address the dynamics of educational change and provide information concerning change strategies for both NCIES planners and other educational program administrators was highly desirable. The need for generalizability to other projects (and programs) was met by conducting a series of thirteen case studies of NCIES projects and then making comparisons among the sites. The methodological techniques for these comparisons will be discussed in later sections of this report.

For reasons discussed earlier in this report, the case study approach seems to be highly appropriate to both the research and evaluation problems at hand. Due to changes planned for the programs of NCIES and the generally changing orientation of the Office of Education to the issue of teacher preparation and in-service training as a whole, this study will treat these thirteen sites as studies in program planning, extending their importance beyond NCIES to the whole range of possible teacher training programs.

B. CASE STUDIES METHODOLOGY

1. Staff Selection and Training

Each case study was prepared by a two-man team following two site visits. The possibility of personal bias entering a case study report was reduced by using two-man teams since the biases one team member might have had were moderated by the other. To provide staff members with some perspective concerning NCIES projects, each team member was assigned to two sites (and, therefore, responsible at least in part for two reports) whenever possible. Again, to offset any joint biases a team could develop, the same pair of interviewers was never used in two places.

The teams consisted of a senior interviewer with primary responsibility for organizing the visit and writing the report, and a junior interviewer. In many teams, however, this distinction was not rigid. As was intended, both team members shared in the responsibility of interviewing and writing reports. Staff assignments to case study teams were made according to the following criteria:

- For senior interviewers, we required: (1) a knowledge of schools of education, traditional and currently innovative curricula, school organization, and institutional change and the theories of change; (2) experience in institutional studies and in some aspects of the substantive area of the projects under their review; and (3) skills in writing, editing, and interviewing.

- For junior interviewers, we required: (1) a knowledge of the substantive area of a program's background; some aspects of institutional research; (2) skills of writing, editing, and interviewing; and (3) experience in working in a team.

A group of Abt Associates corporate staff satisfying these criteria were identified and provided with orientation and training relative to the theoretical issues and practical problems to be faced in developing the case studies. A copy of materials used in this training is contained in Appendix B. Although the senior member had the primary responsibility for planning the research design to be used for each case study, the same training was given to both team members. This procedure allowed both team members to become equally well versed in all aspects of the case study operation so that they could

share planning and interviewing tasks. The training procedures for the field teams are summarized in the following paragraphs.

a. Seminar on Institutional Change - Awareness of change theory was considered critical since sophisticated perceptions were expected from the interviewers. The literature on the theory and practice of educational change was reviewed by several staff members who prepared a bibliography and summary materials for use by the entire field staff. These materials were employed in a training seminar that served to acquaint staff members with this substantive area.

b. Presentation of Case Study Procedures - In order to insure standardization of final products, the operational procedures to be followed in field work and report writing were presented to all interviewers. In addition, reports from the familiarization visits of senior project staff to a few NCIES project sites (See Section 2 of this chapter, where these visits are discussed in greater detail.) were presented to the staff as a whole to provide them with some sense of the structure and spirit of the projects they would visit. Most importantly, plans for the initial, one-day pre-visit that each team would conduct at each site were made and then reviewed by the senior staff. Each team met with the Abt project director before the first visit to insure that both members had a firm grasp of the principles necessary for conducting a useful visit and to determine that the team had an adequate plan for their visit.

c. Report on Preliminary Visit - Following the preliminary visit, each team was required to present its tentative findings to the other staff members. Other field staffers were encouraged to ask questions of the team on all aspects of their visit.

d. Draft Full Visit Plan - Immediately following the presentation to the seminar, each team developed a first draft of a plan for the full site visit. This included unanswered questions raised in the presentation, the issues in greatest need of exploration, a list of the problems and successes of the project which were to be examined in greater detail, and a tentative list of interviewees to be seen in the longer visit and questions

for each. These plans were presented to the seminar for criticism and suggestions; a final draft of the plan was submitted by the team to the director of the case studies. Final approval of this plan by the corporate Research Design Group was required before a team could begin scheduling the full site visit.

2. Field Operations

The success of any large scale research and evaluation effort such as the present one depends in large part on the quality of planning preceeding the field operations. It was crucial that the senior project staff members who had the responsibility for planning the content and conduct of the case studies as well as for training the field staff members be familiar with BEPD projects. Familiarity with the programs that support the thirteen projects was gained in the early part of the contract by a series of interviews and discussions with program staff described earlier. However, it was felt that actual on-site experiences were required to provide staff members with the feel for the project sites that was necessary for responsive planning. Consequently, our senior staff members visited several NCIES project sites prior to finalizing plans for the case studies.

Two of these projects were also included in the thirteen case study sites: namely the TTT project at the University of Pittsburgh and the Teacher Corps project at East Tennessee State University. In addition, the Teacher Corps project at the University of Massachusetts was visited.

Following the initial round of training and planning (described in the previous section), each field team visited the projects to which they were assigned for a one-day familiarization visit. These visits were conducted in December, 1971. Each team was responsible for contacting the project director and making arrangements for the visit. The objectives of these visits are discussed in detail below.

- Initiate local contact - In order to establish a cooperative working relationship with the project staff, administration and participants, each team met with the dean of the IHE in which the project was located, the project staff and administration, the staff and administration of the participating local schools, and the participants in the projects. During these

interviews, the respondents were fully informed as to the purposes of the study, the plan of work, the kind of information to be collected, and the time and scheduling requirements. Because the kind of analysis we ultimately performed was extremely dependent on accuracy of information received, special efforts were made at this time to gain the confidence of our respondents. The team members explained who they were, whom they represented and under what authority they were engaging in the visit. All questions directed to the interviewers were answered forthrightly and fully to avoid losing the confidence of those upon whom we depend for an accurate description of the site. All Abt interviewers were directed to be constantly aware that they were likely to be seen as representatives of a federal agency. Great effort was expended to make clear that we did not represent a federal agency, we did not participate in any decision-making processes, and had no other goals other than accuracy. Further, we made clear that the site had been selected because it was considered exemplary and, therefore, a fruitful place to pursue our major goals of discovering successful practices and strategies.

- Collect site structure and organization data - Once rapport was established with the project administration, it was necessary to document such project characteristics as the table of organization, and geographical actors, historical development, and functional and geographical configurations. This was accomplished through both detailed discussions with the project director and staff responsible for the operation of parts of the project and collection of written documentation when time permitted it; deputy directors, unit leaders, supervisory personnel, cooperating teachers and principals, and participants were interviewed as to the operation of the project. In addition, all available written materials directly and indirectly descriptive of the project (e.g., project progress reports and catalogs from the IHE) were collected. Although we did not expect to achieve an exhaustive description of a project in one day, it was our experience in pretesting this preliminary site visit procedure, that sufficient information could be gathered to allow detailed planning of the full site visit.

- Investigate configuration of strategies, interinstitutional cooperation and problem census - This was the most difficult task of the preliminary visit. It was, however,

critical since it involved two basic aspects of the objectives of the preliminary visits. First, it provided the field team with a feeling for the idiosyncratic nature of the project, a key factor in sensitive and insightful examination. Our measurement instruments were, after all, the trained perceptions of the interviewers, and these can be effective only to the extent to which their active searching is guided by an accurate and reliable sense of the underlying dynamics of the project. Second, this task involved the collection of information and insights from which we established the central site-specific questions to be explored in detail in the full site visit. The strategy of the full visit was developed based on the knowledge and impressions gleaned from the preliminary visit. The procedure by which the strategy for the full visit was established is described below, but it should be made clear here that, in order to enhance comparability across sites, all team members participated in the development of the case study strategy for every site. Thus, it was desired that every team member become aware of the issues, problems, strategies, and goals to be examined in detail in every site.

In addition, these initial visits presented both an opportunity for training our interviewers and a means for evaluating this training. The preliminary visits allowed us to make whatever adjustments in training or staffing that appeared to be necessary before we entered the full field effort.

The following list of tasks for field staff members to perform during the familiarization visits was presented to them during their training sessions prior to the visit. This list summarizes the activities during these visits, although the actual actors interviewed and places visited, varied greatly from site to site.

- Both interviewers met with the project directors to discuss the general problems, strengths, and weaknesses of the project. These discussions were the first order of business to allow planning of the rest of the day's meeting there, and on occasion were attended by other core staff of the project.

- The senior member of the interview team met with the project director's immediate superior, a Dean or department head at the involved IHE, or the superintendent of the LEA, both as a courtesy and for collection of information. The interviewer assessed the individual's interest in the project, his attitudes toward it and the changes it has produced, and the amount and nature of inter-institutional cooperation.

- Both members met with participants and involved faculty members to assess their impressions of the project and to gain some insight into the informal organization of the project.

- The junior member visited at least one participating local school and talked with the principal and some teachers. Whenever possible, he observed participants in action in order to identify problems at the LEA level which were not apparent from discussions with the project management. In addition, this interview served to demonstrate to the project director our intentions to field a broad effort and to study problems from several perspectives.

- Both members collected as much written material concerning the project as possible.

A final benefit of these visits was their use in staff training sessions. Presentations of findings from each site to all field staff allowed them to develop an overview of the content and strategies of other projects and, more importantly, served as a catalyst for discussions about the major issues in innovation and change theory that would be central to the case study reports. The theoretical principles discussed here were then applied to the design of strategies for the second round of field visits.

Once the field staff had completed its training, the final wave of site visits was conducted. These week-long visits were conducted between January 30 and March 10, 1972. No team was allowed to enter the field until its detailed research plan for the site had been completed and approved by the project director and the corporate Research Design Group. Their plans contained:

(1) A detailed description of the tentative hypotheses to be investigated during the visit, based on experiences of the preliminary visit;

(2) A full schedule of interviews for Monday through Wednesday of the week; and

(3) Written confirmation from the site of the interview schedule, usually in the form of a letter from the project director.

Although explicit hypotheses were worked out by the team as a part of their training, we anticipated that new ones were likely to emerge during a more intensive study of the project. Such hypotheses are treated as completely valid. As the week progressed, new actors on the site that could provide useful information would be identified and individuals previously interviewed would be contacted again for additional data. These interviews took place on Thursday and Friday of the week. Since it is clearly impossible to specify such happenings, plans for these additional two days were left up to the judgment of the field teams themselves.

The immediate products of this week's work included:

(1) A short report on the reception they received at the site and any problems they may have encountered; and

(2) A first draft of the case study.

The final activity of the field team in contact with the sites was a letter thanking the project director for his cooperation, and if and when the need arose, calls or letters to the project director to request additional information or confirmation of data as the writing of the draft reports progressed.

3. The Content of the Case Studies

One of the basic premises underlying the use of the case study methodology is that every site is unique. There are projects located in urban areas and rural areas; serving one or many LEAs'; training para-professionals or Ph.D's. Most importantly, each project serves a specific local personnel need in the way best suited to meeting that need. As a result, the format of the case studies varies greatly from site to site, reflecting the inherent differences in the structure of the sites. In addition, there are stylistic differences due to the writing and organizational styles of the different authors of each case study. There was no formal, fixed, outline that every case study had to follow, allowing the organization of the report to be a function of the organization of the project. Although lack of structure makes some demands on both the readers and writers of the case studies, it allowed the authors freedom to capture

the unique spirit of the project and its local context, for this is the most important information we set out to obtain.

Some degree of consistency across case studies does exist. Each team responded to a series of rating scales describing their project on each of 37 dimensions. Although the body of the case studies may look different, each one has very similar contents. The case study teams all received the same training and instructions as to the major issues to be addressed in the report. In both staff training and later revision and editing of draft reports, great care was taken to assure that each of the following five general content areas was adequately represented in the case study. Taken together, they provide a total picture of the project and its important characteristics.

(1) Project description - A verbal snapshot of the project as it was at the time of the field work serves several purposes. First of all, it provides documentation of the activities of the project with much more richness than could a management information system. In addition to this "process" information, "context" data is also highly important. Much of our later discussions of the dynamics of the project and its change strategies depend on some knowledge of the context in which the program operates. This context includes the general characteristics of the involved IHEs, LEAs, SEA, and community as well as information about the individuals involved in the project, from the project director to the trainees to actors representing the various institutions. Our assessment of the relative success and appropriateness of a particular strategy will have to be based on this context. What is a valid, successful approach in one place may be unsuccessful or completely inappropriate somewhere else.

This description of the environment in which the project operates will also be useful in making generalizations to future projects about the observations made in a particular case study (or the general conclusions of the entire report). Since the thirteen projects we studied were intentionally not selected by any sort of random sampling, the results we

obtained cannot be statistically generalizable beyond the thirteen sites. However, the findings can and will be extended to other situations on judgmental grounds. As an educational planner considers, for example, a new teacher training project, he may come across this report. If the institutional environment in which he will operate his project is similar to some described in the case studies and if his goals are the same as the goals of some projects described, he may wish to consider our recommendations in planning, perhaps by adopting a successful strategy described in one of the case studies. The detailed description of the project's context will allow him to determine whether this generalization has any face validity based on the similarity of that situation to his own.

(2) Identification of strategies - One of our major tasks in the case studies is the identification of the strategies used by the projects in order to effect institutional change. Since the thirteen projects were all designated as "exemplary projects" by their program offices, we can expect to find some successful strategies. Realistically, we can also expect to find some variability in their success and therefore expect to find some strategies that were attempted unsuccessfully. Consequently, the field staff was directed to pay careful attention to the strategies used by their project, both consciously and unconsciously. Whenever possible, project staff themselves described what their strategies were in order to lend some external verification to the report. Also, strategies used previously by the project may be of interest and will be included in the case study.

(3) Dynamics of change - In order to evaluate the appropriateness of a strategy, it is necessary to investigate the organizational characteristics of the institutions involved in the project and determine how change may occur there. In any organization, there will be definite paths by which it is appropriate to attempt change and others that are inappropriate. These will be determined by the organizational properties of the institutions: who makes what decisions. The field staff therefore studied the institutions to determine the decision making patterns and organizational chart of the project and related institutions, especially those that the project sought to change.

(4) Perceived impact of the project - Abt Associates was specifically not conducting any objective assessments of the impact of the projects on their institutions. However, impact will be discussed in more subjective ways. Some types of impact (changes in curriculum, recruiting patterns, etc.) are very evident and easily documented. We approached the broader, more subtle areas of potential impact by reporting the impact as perceived by project actors. In addition, the field staff made some overall conclusions based on their own personal judgments. Such conclusions are clearly identified as the opinions of particular staff members and not as "fact." Finally, each case study was reviewed by the project staff before entering final draft.

(5) Other unique features - We anticipated that there would be many things at each project that distinguish it from all other projects but that could not be specified on an a priori basis. Consequently, the field staff was encouraged to identify and report any idiosyncratic aspect of the project related to the success of a particular strategy, especially if it affects the replicability of the strategy to other situations.

4. Reporting procedures

Each of the thirteen case studies contained in Volume II of this report passed through several drafts, reviews and editings before they assumed the final form in which they now appear. Each site team prepared a first draft immediately upon return from the field. In this draft, they were encouraged to write as much as they wanted to, with absolutely no restrictions as to form or content. Their immediate impressions and reactions to the site were desired, as was the documentation of quotations or events that could be used in future drafts. Following the first draft, each team filled out a series of rating scales (to be discussed in Chapters IV and V) that served both quantitative and heuristic purposes. Each team discussed their responses to the scales and their justifications for these responses with the project director and other key staff members. Since the scales were oriented toward the major issues of this study, this discussion was intended to make the team members think more rigorously about these issues

and to remind them to include them in their next revision of the case study.

The second draft, also prepared by the field team, was a more refined version of the first, with revisions based on various types of feedback and constrained by certain other restrictions. The first draft had been read and commented upon by the project director and these comments, together with those made during the rating scale discussions, were to be incorporated into this second draft. Also this draft required the authors to fully substantiate all conclusions either by attribution of the conclusion to some project actor or by specific reference to project events or activities. No personal impressions of the field staff were permitted in this draft, although they were encouraged in the first version. Finally, all of the general issues described in the previous section were addressed.

This second draft was then reviewed internally for editorial and substantive quality by the project director, other project staff and by Abt Associates' Research Design Group. When an acceptable draft had been completed, it was sent to the respective project directors for their reaction, comment and correction of all factual errors (misspellings, incorrect titles, and so on). Differences in interpretation of sets of events were treated in two ways. When it appeared that the field staff misinterpreted events, the final version contained the more acceptable interpretation. On the other hand, if it was felt by the project staff as well as the site team that our interpretation was correct, then it remained in the final draft. In these cases, we have indicated that there existed a difference of opinion and have included as a footnote or appendix to the case study the project director's remarks.

The final draft, included in Volume II, has incorporated the remarks of the site project directors and reflects a final internal editing for style. Each case study has been footnoted and in some cases reorganized to interface better with the rating scales that relate to the project. Wherever possible, names of individuals have been deleted to preserve anonymity. Since the project will be identified, certain individuals (the project director, IHE, or LEA important staff, etc.)

are easily identified even without naming them. However, we are more concerned with the anonymity of other types of actors (such as project participants, faculty members, or lower level project staff) who could be put in unfortunate positions by having statements attributed to them.

C. THE RATING SCALES

1. Rationale for Rating Scales

A crucial part of our total approach to the problem of applying change theory to educational program planning is the need for cross-site analysis of our results. One of the traditional objections to the use of the single case study as a research method is its noncomparability. The present study was conceived to maximize the comparability among the thirteen projects and to allow for some (albeit judgmental) generalization to situations outside of the thirteen sites. The rating scales used in this study were employed to add a series of dimensions on which the sites could be easily compared. Although the scales have a quantitative appearance, it should be kept in mind that a project's rating on the scales was made by the case study staff members that visited the project. Consequently, the ratings reflect the perceptions of the staff in much the same way as do the case study reports.

The rating scales, then, serve several purposes. As indicated above, their primary utility is as a quantification technique which allows a standardized response mode and provides data on many variables related to the study. This is, of course, most important to the cross-site analysis. In a similar manner, the scales serve as a data reduction technique, reducing the data of the case study reports to a manageable, finite number of variables.

Another important application of the rating scales is not directly related to analytic activity. The field staff's response to the first draft of the scales was used as a heuristic and discussion aid for the case study writers. The activity of filling out the scales, which referred to most of the critical variables that should have been addressed

in the text of their case studies, served to remind writers of issues they neglected to include and, simply, got them thinking about the more complex issues related to educational innovation. To support these activities, the Abt Associates staff members that visited each project discussed their responses in a meeting with the project director. These discussions, in addition to providing a basis for revision of the rating scales, required the case study authors to defend the inferences they made in their reports as well as to cite specific evidence justifying their responses to the rating scales. These meetings also aided scale development by defining post hoc such terms as "innovation" and "institutionalization." Such redefinitions are included in following chapters as part of the presentation of the rating scales.

2. Development of the Rating Scales

As in the development of any measurement technique, several sequential activities were performed in constructing the rating scales. No claim is made for the psychometric sophistication of the scales (since they consist of a series of seven-point Likert scales), so the most important decisions in scale development related to the items (variables) to be included or excluded.

All of the scales were designed for maximum "face validity", that is, the variables a scale refers to can be identified directly by inspection of the item. For example, one item refers to the "degree of institutionalization" of the projects. This scale was used as a variable relating to, as would be expected, the degree of institutionalization. When a negative response is perceived as threatening to a respondent, however, it is not always effective to ask him such kinds of questions outright. In this case the respondents to the rating scales were Abt Associates field staff members who had no personal involvement in the project and could be expected to respond forthrightly.

Since each of the scales was to become a variable for later analysis, the choice of items was critical. There were several sources from which

ideas for the content of items were derived. The first and most important was the literature on change theory. Virtually every one of the scales we used has been included as a variable in the research of at least one major author in the field. In addition, the scales were written by project staff members who also served as field staff on case studies. Because the scales were written after the case study field work, the content of the items reflects a sensitivity for the projects that were being rated and the hypotheses then emerging in the minds of the field staff. This was important since, if any of these hypotheses were to be tested empirically by means of the rating scales, the data had to be collected at this time.

As important as the items included in the scales are those that were not. For instance, scales relating directly to project impact or success were excluded in keeping with the theme of the overall study, which was designed, at least in part, to facilitate funding decisions by the Office of Education. Our assumption was that institutions most in need of change are those least likely to produce effective programs. Thus using effectiveness as a funding criterion would exclude precisely those institutions in the target group. Also excluded from the scales were items relating to personal characteristics of project actors such as faculty's "orientation to innovation" or "competence of LEA administrators." These were omitted for two reasons: first, measurement of such variables is technically difficult and expensive; and second, since such characteristics are not directly manipulable either by the institutions or the Office of Education, they do not constitute the information on which the Office of Education bases its decisions.

From the general item domain left (the domain of items concerning project and institutional structural and organizational properties), 28 items were selected and scales developed for each as a first draft. These 28 scales were then applied by each field staff member to each project he visited. Consequently, there were two sets of ratings for each project. After this, each site team met with the Abt Associates project director to discuss the differences in their responses and to support their ideas.

Finally, copies of the first draft scales were reviewed by consultants active in the field of change theory. Their comments, together with data from the administration of the scales and comments from the staff respondents, were used to develop the final version of the scales. Many of the original scales were modified. A few were deleted because they overlapped with others; and several new areas of interest were added. The resultant version, now containing 37 scales, is presented and discussed in detail in Chapter IV of this volume.

The final application of the scales was obtained from each team, by having the two team members meet and work out a joint response. These combined ratings and justification for them were then presented to the Abt Associates project director and other key project staff for review. The final version of the case study reports is cross-indexed with the rating scale discussions so that the justification for responses to each scale can be located in the text of the case reports. These data are then tabulated and analyzed in several ways. The results of these analyses are the topic of Chapter V, and the policy implications of these results constitute the remainder of the report.

APPENDICES

APPENDIX A

SUMMARY OF ORIGINAL PROPOSAL

. Short Summary of the Original Proposal to Conduct an Impact Evaluation of the Bureau of Educational Personnel Development

July 4, 1971

This discussion describes the project scope and the Abt proposal methodology for the impact evaluation of eight (8) Bureau programs.

Project Scope:

The purpose of the study is to develop impact measures so that the Bureau can make decisions to:

1. continue, discontinue, expand, cut back programs;
2. modify a specific program;
3. delay decisions until more information is available.

Abt will evaluate 8 Bureau programs. They are:

Career Opportunity (COP)
Early Childhood (EC)
Educational Leadership (EL)
School Personnel Utilization (SPU)
Special Education (SE)
Teacher Corps (TC)
Training of Teacher Trainers (TTT)
Vocational Education (VE)

Presently, the Bureau sponsers 344 projects for approximately 25,500 participants. The Career Opportunities Program is the largest, sponsering 132 projects which train 8,000 teacher aides.

The impact measures fall into three major classes. These are:

Institutional change;
Attitudinal change;
Achievement change.

The primary populations are the training institutions that conduct the programs and the program attendees (participants). However, our task calls for the development of additional impact measures on the schools,

school system and communities in which the participants teach.

Figures I, II and III broadly describe the specific impact measures for each class that we will develop. The majority of the measures will be developed by comparing Bureau project performance against "a control" group. In addition, we proposed to gather cost data and perform cost effectiveness analyses of the various programs and program elements at the training institutional level.

Sampling Plan:

Our sampling approach is shown on Figure 4. Our proposal suggests drawing 87 sites across of the eight programs. From these sites we would draw the sample of participants. Since all programs require an extensive practicum, we will draw our students, schools, school system and community data from the practicum site of the participant.

At each level we will also investigate a "control group". Our plan calls for minimum description of an LEA. Hence, we would hope to gain "control" students from the same school, schools and communities from the same system, and system comparisons from nearby LEA's. The sample size for gathering data within a LEA is estimated at 60 sites for the participant group.

The matching at the training institution level will be performed by identifying and ranking alternative institutions with regard to relevant variables, selecting as a comparison institution the one with the closest fit to the participating institution. With the exception of the comparable students, data gathering from the "control" groups will be performed in the spring. This delay will provide adequate time to gain cooperation from the local schools. While we proposed to test 87 training institutions, the actual sample could be considerably larger, as the project concepts within programs can vary. For example, Early Childhood projects are conducted on part-time, full-time or summer session bases. Further, they can be directed to the development of aides, teachers and administrators.

Figure I: Institutional Impact Measures by BEPD Program

I. Institutional Change	Control Group Req'd	Bureau Programs COP	EC	EL	SPU	SE	TC	TTT	VE
A. Training Institutions									
1. use of practim sites	+	+	+	+	-	+	+	+	+
2. use of clinical personnel	+	-	+	+	-	+	+	+	-
3. recruitment, entrance requirements	+	+	+	+	-	+	+	-	+
4. curriculum	+	-	+	+	-	+	+	+	+
5. project relationship to other institutional programs	-	+	+	+	+	+	+	+	+
6. specificity of goals, objectives	+	+	+	+	+	+	+	+	+
B. School Systems									
1. teacher's role	+	+	+	-	+	+	+	-	+
2. classroom type	+	+	+	-	+	+	+	-	+
3. specificity of goals, objectives	+	+	+	-	+	+	+	-	+
4. student's role	+	+	+	-	+	+	+	-	+
C. Educational Agency									
1. certification		all states							

+ = required

- = omitted

Figure II: Attitudinal Impact Measures by BEPD Programs

II. Attitudinal Change	Comp. Meas.	COP	EC	EL	SPU	SE	TC	TTT	VE
A. Project Participants	control								
1. teacher ed. programs		+	+	-	+	+	+	+	-
2. teaching		+	+	+	+	+	+	+	+
3. self-concept		+	+	+	+	+	+	+	+
4. peer groups		+	+	+	+	+	+	+	+
5. other ed. person. -- superior/subord.		+	+	+	+	+	+	-	-
6. target schools/stud.		+	+	+	+	+	+	+	+
7. ed. theory		+	+	+	+	+	+	+	+
8. teacher effectiveness measures		+	+	+	+	+	+	+	+
B. Project Participants	pre-test								
1. specific project		+	+	-	-	+	+	+	+
2. peer group		+	+	+	+	+	+	+	+
3. target school		+	+	+	+	+	+	+	+
4. target/students		+	+	-	+	+	+	+	+
C. Students	control								
1. teachers		+	+	-	+	+	+	-	-
2. teacher compentency		+	+	-	+	+	+	-	-
3. school in general		+	+	-	+	+	+	-	-
4. other students (disad.)		+	+	-	+	+	+	-	-
5. self		+	+	-	+	+	+	-	-
D. Community	control								
1. staff contact w/ parents		+	+	+	+	+	+	+	+
2. #/type of activities		+	+	+	+	+	+	+	+
E. Schools-Climate	control	+	+	+	+	+	+	-	-

+=required
-=omitted

Figure III: Achievement Impact Measures by BEPD Programs

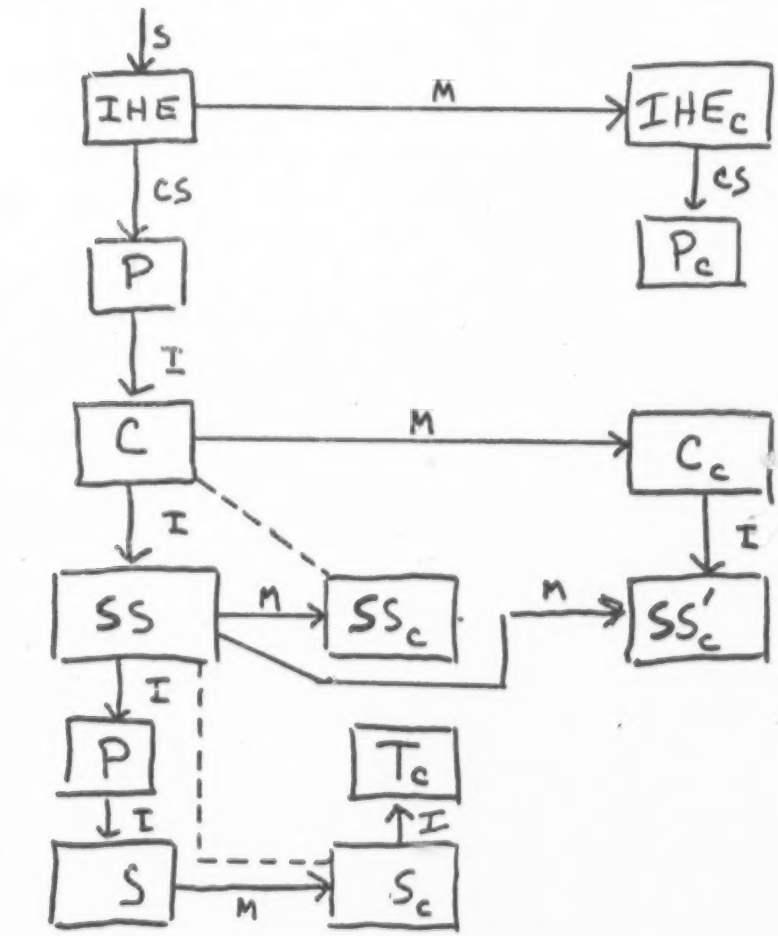
III. Achievement Change	Comp. Meas.	COP	EC	EL	SPU	SE	TC	TTT	VE
A. Project participants									
1. recent developments in ed. admin.	pre & post test & control	-	-	+	-	-	-	-	-
2. knowl. of teacher training strat.		-	+	-	+	+	+	+	-
3. knowl. of teaching strat.		-	+	-	-	-	+	+	-
4. knowl. of research efforts of teacher effect		-	-	+	-	+	-	+	-
5. ability to identify handicapped in classroom	no pre-test	-	-	-	-	+	-	-	-
6. prescribe ind. curric. to handicapped	no pre-test	-	-	-	-	+	-	-	-
7. instruct. skills	no pre-test	-	-	-	+	-	-	-	-
B. Participant Behavior									
1. teaching others as been taught	observ. partic. only	-	+	-	-	-	-	+	-
2. employment on course completion		-	-	+	-	+	-	-	+
C. Students									
1. reading/math	pre-post test, control, obser.	-	-	-	+	+	-	-	-
2. behavior (18 pts.)		-	-	-	+	+	-	-	-

+=required

-=omitted

Figure IV.

A Flow Chart for the Generation of Comparison Groups



Arrows indicate direction of flow. Dotted lines indicate associations.

Letters above lines indicate form of selection:

S = Sampling
M = Matching
Cs = Cluster Sampling
I = Implicit

Comparisons are made along the horizontal lines

Code:

IHE = Training Institution (project)
P = Participant
C = Community
S = Student
SS = School System

Instruments:

We anticipate using previously developed instruments whenever possible for gathering attitudinal impact data and standardized tests for student achievement. Our instrument development efforts will be mainly in the areas of institutional impact and participant achievement, with some concern for revision of existing attitude scales to make them more applicable to the target populations. Such development will be conducted with the aid of panels of experts in the specific areas brought together into workshops and asked to define the areas to be covered by the instrument and to generate items for it. These workshops will be held in Boston and Washington, bringing together experts in the areas of:

Teacher Training Strategies
Research in Teacher Effectiveness
Special Education
"Instructional Skills" (for SPU)

Concurrently with our impact evaluation, Resource Management Corp. (RMC) will be conducting a process evaluation of the same programs. We hope to gain the cooperation of the Bureau and RMC to eliminate possible areas of duplication.

7/1/71

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Impact Evaluation of the Programs of the Bureau of Educational Personnel Development

Operational Plan

July 29, 1971

Certain modifications in the following operational plan have been necessitated since its acceptance by OPPE on July 29, 1971.

- Behavior measures (p. 3). It was decided not to use the behavioral indices presented due to their perceived racest implications. An instrument to measure the attitudes and opinions of children is being developed. See the COP study quarterly report for more detail.

- Control groups (p. 6). It became evident that it is unfeasible to study a control population such as the one proposed. There simply are not ESEA Title I schools in participating LEAs that are not serviced by COP. Alternatives to this are being explored.

- Size of samples. It was agreed to study 16 COP and 15 case study sites. However, OE indicated that they would like the addition of three urban COP sites to the spring survey. To accomodate this added effort, within the budget, two case study sites were deleted, thus yielding a total of 13 case study sites and 19 COP sites.

INTRODUCTION

The essence of Abt Associates' plan is a dichotomized study of the impact of the eight BEPD programs identified as subjects for investigation in both the RFP and our proposal. The first part is in the form of an analytical survey of the impact of the Career Opportunities Program in the areas of institutional change, particpant attitude and behavior, and student achievement and behavior. The other part will be a series of case studies of the activities and impacts of exemplary projects and project sites chosen from all eight subject BEPD programs. The focus of the case studies will be on the operational dynamics of the various BEPD strategies used and the resulting impacts of those strategies. The following sections of this plan discuss the two parts of the study in detail, as well as items of overall concern.

The plan delineated here arose out of the obligatory resolution of the ambiguity inherent in the specification of sampling procedures as they appear in different places within the contract between the Office of Education and Abt Associates Inc. The nature of the resolution addresses the expressed future direction of the Bureau of Educational Personnel Development. The present operational structure of the Bureau that provides for a number of discrete programs to upgrade educational personnel and the systems within which they work will be changing in the near future. The expectation is that only the Career Opportunities Program and the Teacher Corps Program will retain their present identity. The others will be subsumed under a new "Teacher Center" concept as current funding commitments are fulfilled. This study will identify and save those valuable lessons learned from past experience for the use of all of BEPD in its future role.

It is likely that Teacher Corps will be managed from a different Federal office in FY 1973. In addition, Teacher Corps, a mutable program, changes its characteristics and objectives with each new two-year operating cycle. Rather than a distinctive, unified program, Teacher Corps is like a tandem series of program, one growing out of another, that are administered by the same Bureau. Thus Teacher Corps will not be singled out for individual evaluative treatment as will the Career Opportunities Program.

CAREER OPPORTUNITIES PROGRAM (COP) IMPACT STUDY

This study has been designed to provide data, testing three hypotheses:

H1: COP has been an effective tool in improving the educational experience of students in the classroom.

H2: COP has been effective in enhancing the career potentials of its participants.

H3: COP has engendered change in institutional structures.

In order to test these hypotheses, data will be obtained from the following sources:

- Students
- Participants
- Institutions

Students

The eventual target of all educational reforms is the student. Consequently, an impact evaluation must address the effects of a program on the students involved. Unfortunately, in most cases, COP being no exception, such "higher order" impacts occur only after change has taken place at previous levels, as in the performance of the teacher. Since we are dealing with a filter effect, only dramatic changes in student performance will be evident in a short time.

Our evaluation will be limited to students in grades 1-6. We have chosen this grade span for several reasons:

- Most COP programs are in elementary schools;
- Achievement tests are available which span these grades;
- The effect of educational inputs becomes more heavily confounded with past school experiences and extra-school factors as the student progresses through school.

Our evaluation will assess the program's impact on students' achievement and behavior. Attitudinal data is also of interest, but we feel that direct assessment of the attitudes of young children is more appropriately carried out in the case study portion of this evaluation.

1. Achievement Tests:

Standardized tests of basic reading and mathematics achievement, such as the Metropolitan or Stanford, will be used. Criteria for selection of the actual test to be used will include minimization of cultural bias and testing duration.

Of interest here will be a comparison of the performance of students who have had COP aides as a part of their classroom experience with those who have not. Further, we may make comparisons within the sample of COP students to investigate possible determinants of impact, such as the relationship of the amount of time the aide is actually teaching the class with the impact on achievement.

2. Behavior:

Behavioral measures may be obtained unobtrusively by investigating school records. Here may we find such items as:

- number of days absent;
- number of referrals to discipline office;
- number of broken windows in building;
- number of times tardy.

We may also look at changes in these indices over time, beginning before the institution of COP aides in the school to the present.

These data are indirect measures of the students' satisfaction with the school in the broadest sense. One goal of COP is to improve the classroom situation and thereby improve the student attitudes toward education. Measures such as the ones suggested above are unobtrusive indices of behaviors reflecting student attitudes.

Participants

Although the impact on students is COP's primary concern, the effect of the program on the aides themselves is of nearly equal importance. If the program is unsuccessful in training aides, no impact on students could be expected. Similarly, even if no impact is detected on student achievement, the establishment of an enhanced set of reality-based aspirations on the part of the participants would constitute a degree of success. It must be recognized that COP has as an expressed goal,

> ...to attract capable persons to careers in education in a way that will improve both education and employment opportunities for the poor, and establish career lattices in schools so that productive careers can be followed by those recruited through this program. Project Directors Handbook, COP Leadership Training Institute, December, 1970, p. 1.

To explore this, participants will be administered the following:

- A standardized test of basic skills;
- A questionnaire designed to elicit information concerning:
  - career plans and aspirations;
  - attitudes towards the project, students, peers, teachers.

Here we will make longitudinal comparisons of the participants, investigating their changes on these dimensions over time. This will be accomplished by use of a pretest and a post-test. The data gathered may also serve as the basis of a long-term longitudinal study of COP participation.

There are two dimensions of participant characteristics which are of particular interest in this study. The first is the differential effects of length of time in the COP program. We will obtain information on this dimension when we field this study and use it in later analysis, i.e., we will divide the participants sampled into first and second year COP participants and analyze for differences in output measures between them.

A similar procedure is suggested to explore the issue of amount of use of COP participants as instructional aides. While the Project Director's Handbook specifies that "Teacher aides must be used as direct participants in the learning-teaching process" (p.4), the question has been raised as to whether COP aides are, indeed, used as direct instructional aides in the classroom, or relegated to clerical jobs. Again, we will obtain this information (i.e., functions of aides) when we conduct this survey and develop incidence figures. If the data warrants it, we can further analyze the outputs on participants as a function of amount of direct classroom instructional experience.

Institutions

In discussing institutional change, it is necessary to distinguish between simple change and impact. As we intend to use the term, an institutional impact is a change in an organization which has occurred as a result of the introduction of a project but was not a direct part of that project. That is, use of COP aides in a classroom is not an impact--it is a part of the project's operation. On the other hand, introduction of aides funded by the LEA into other schools in the district represents an impact, an institutional change which can be related to the project but is not an integral part of it.

Generally, institutional impact takes time to occur. Since COP is only two years old, we would expect little impact to be evident even in the oldest sites. Institutional impact is a relatively low priority item for COP; however, an multiplier or ripple effect would be a welcome finding. To assess the extent of institutional impact arising from COP, we will gather information from the following sources:

1. Teachers in COP schools: We will consider the impact of the introduction of COP aides into classroom on teachers' behavior and the structure of the classrooms.

2. SEA: We will survey all 50 SEA's to determine what changes in certification requirements have occurred in the past few years and if any of it can be attributed to COP projects in the state.

3. LEA: We will survey administrators of the LEA (superintendents, principals, etc.) to assess the changes in career structures, hiring practices and pay scales which have occurred since the introduction of COP.

4. IHE: We will investigate such things as changes in curriculum and faculty make-up, and recruitment and entrance procedures.

5. Schools: We will explore such things as changes in schedules and differential staffing.

In order to make these assessments, the following research design will be implemented:

RESEARCH DESIGN--FIELD SURVEY OF COP

	SAMPLE	CONTROL	COMMENTS
Site	16 sites selected by PPS (probability proportional to size) with extreme sites excluded. (Size determined by number of participants)	See Student Section below	Comparisons will be total sample versus total control; that is, comparisons will be only between groups.
Participants (COP)	30 participants stratified by grade at each site. N = 30 x 16 = 480	N/A	Comparisons will be by pre/post testing, i.e. each subject serves as his own control.
Students	A subsample of 5 sites will be selected from the 16 sample sites. These sites each have 30 participants (see above) or 150 participants each associated with a class. Randomly select 2 classes within each grade level within each site. Sample all students within each of the selected classes. Assuming an average of 30 students per class, N=30x2x6x5=1800.	ESEA Title I schools which are not serviced by COP or any other aide program. 2 schools selected in geographic proximity to schools in the 5-site subsample. From these schools 2 classes at each grade level (1-6) will be selected. All students within these classess will be tested, i.e., N = 2 x 12 x 30 = 720	Comparisons made between COP and non-COP; also within COP in selected areas.
Institutions			
SEA's	Exhaustive: all 50 to check out changes in certification.	N/A	
LEA's	These are associated with sampled sites. Will interview representatives of each of the institutions at all 16 sites.	N/A	
IHE's		N/A	
Schools		N/A	
Teacher	12 associated with each sampled site, i.e. for each sampled class/participant N = 2 x 6 x 5 = 60	N/A	

The multi-stage sampling plan outlined above was developed to allow us to focus on those populations of most concern, namely, COP participants and their students. Use of a probability proportionate to size (PPS) sample gives each participant in the population an equal chance of selection. The procedures described below permit us to use the resultant data on participants directly; that is, we can deal with unweighted data at the participant level. Results on participants can be generalized directly to the participant population.

Students in Title I schools are primarily from the lower end of the socio-economic scale. We know that socio-economic index is a potent variable in student performance. Since our population is drawn from a narrow range of that scale, we can safely assume that variability of performance has been sharply reduced, i.e., we have a very homogenous group. Another way of saying this is that the variability within any one class will be greater than the variability between classes and schools. On this assumption (which can be tested in the analysis) our results will be generalizable to all students in Title I schools.

Procedural Details of the Research Design for the COP Survey

I. The Site Sample will consist of 16 COP schools selected at random with probability of selection proportional to number of COP participants. This is a simple one-stage cluster sample. It is self-weighting with respect to inferences about the total population of COP participants; that is, the simple (unweighted) average of the means of the sampled schools with respect to any participant characteristic is an unbiased estimator of the overall COP population mean with respect to the characteristic.

The great majority of COP projects have between 30 and 200 participants each. The exceptions are either so large as to swamp the analysis or so small as to have no appreciable effect on the results; we shall therefore restrict the survey to this size range. Within this middle range, we anticipate that the characteristics of principal interest will vary much less from site to site than from participant to participant within a site, from grade to grade, or from pupil to pupil within a classroom group.

We orginally proposed a sample of 14 sites out of the total of 132, which would have yielded estimates of parameters at the site level with

95%-confidence error tolerances of 0.5 standard deviations: probably sufficient precision, given our reduced, relatively homogeneous site universe. The sample of 16 sites that we now envisage will provide somewhat more precision inasmuch as the population from which the sample will be taken will be somewhat smaller through exclusion of extreme cases.

II. The Participant Sample from the selected sites will be stratified and balanced so as to insure maximum precision of comparision from site to site, from participant to participant, and from grade to grade. Within each of the 16 sites, 5 participants will be selected at random from each of the 6 grades (1-6) for a total of 480 participants. If the sampled sites include 1,000 participants, this doubly stratified sample of 480 will yield a great deal of precision for generalizations to the population of participants in the sampled sites, an error tolerance of less than 0.06 standard deviations with 95% confidence. Although this participant sample is not self-weighting for generalizations about all COP participants, we can make such generalizations by weighting site means in proportion to their sizes. We get less precision, of course, in generalization to the larger population (all COP participants) than to the smaller (participants in sampled sites) but both generalizations are unbiased.

III. The Student Sample will be a two-stage cluster sample of the universe of students of COP participants. Within each of the first five sites selected in heading I above, we shall test all the students of the first two participants selected out of each grade. We shall thus have, on the average, 30 students in each of 2 classes in each of 6 grades in each of 5 schools for a total of 1800 students. This design assumes that pupils within classes will vary more than classes within grades or schools within the total school population with respect to the characteristics of interest.

A control group is required for the student sample. We propose to select 2 ESEA Title I schools within geographic proximity of the 5 schools in the subsample. These constraints maximize the comparability of the two groups by requiring that the schools be eligible for Title I and by adding a geographic constraint. This is not a formal matched group, as our purpose is to compare two groups of students and not schools. Although we have chosen only two sites from which to draw students, we have a sample of 720--quite large enough to make meaningful comparisons.

CASE STUDIES

The case study research design concept lends itself well to an impact evaluation of BEPD programs in this transitional period of change within BEPD. The future direction of the Bureau toward the development of "Teacher Centers" can benefit from the past experiences of the several discrete BEPD programs. Because the Teacher Centers are expected to utilize and build upon impact-producing strategies and approaches identified in present program experience, the "why" and "how" of these techniques will be invaluable to the formation and operationalization of the Teacher Center program. The in-depth case studies of current exemplary BEPD projects will provide the Bureau with the means of identifying and evaluating the delivery system strategies in terms of the planning, implementation and operating requirements as well as their impacts on teachers, institutions, and, where appropriate, students. It will contribute in a major way to the understanding of the organizational and conceptual strategies needed to effectively coordinate schools, communities and institutions of higher education in creating effective in-service, reality-based programs.

The content of each of the fifteen case studies being planned by Abt Associates will vary in emphasis from site to site. We see the following, however, as being the most important elements:

- the impact achieved;
- the notable characteristics of the site--those aspects that make it exemplary and worthy of study;
- the reasons for particular decisions, activities and approaches;
- the dynamics of the attainment of desired program effects;
- the dynamics of the constraints to desired program effects; and
- problems to guard against.

In addition, the case studies will evaluate and describe the impact of the accomplishments of each project in terms of its objectives; that is, its plan versus its performance.

The actual sites to be visited by the case study teams will be chosen from a list of "exemplary" projects prepared by each BEPD Program Director in consultation with Abt Associates Inc. The criteria for determining what constitutes an exemplary project will evolve in our consultations.

These projects may be successful or ineffective; they may be radically innovative or fairly traditional. The criteria is one of information content--what we can learn from the site that can be applied elsewhere. Fifteen case studies will be conducted with the distribution of sites to the programs to be determined in consultation with the client, each of the eight programs being represented in the case studies.

We will use inputs from several sources in preparing our field effort, including familiarization visits, BEPD records and RMC process data. Initially, one or two projects will be visited to gain some practical knowledge of the entity being studied. Once the projects have been selected, we will request copies of the project's proposals, as well as other relevant information on file in Washington, i.e., in-house evaluation efforts, from the appropriate project directors. Finally, the early instrumentation of the RCM process evaluation will aid our efforts in focusing the research direction and emphasis of the field staff.

On the basis of the above data and the familiarization phase of the evaluation, several documents will be written. One will be a pre-visit questionnaire to be administered by telephone to the project directors. This instrument will ask questions which are necessary in planning the individual case studies that cannot be answered elsewhere. The questions will surface the identities and roles of key project personnel to allow for more efficient planning of the specific case studies. Secondly, we will develop a general case study guide for the use of the field personnel. This document would make general recommendations concerning areas of concern and list important persons to interview--an approach which has been used by Abt Associates in previous case studies with considerable success. A "dummy" case study will be written to give an indication of the possible form and content of the site reports. This document will be submitted to OE for comment to insure that we are agreed upon the direction that case studies are taking. We shall develop a list of impact measures for study. The list would include institutional structure, participant behavior and impact of the project on students. The specific variables and measures will vary from case to case, as we choose a specific investigative approach suited to the situation. Finally, the beginnings of an analysis plan will be developed. The final version of the data handling procedures cannot

be made until the impact variables have been clearly defined and the final cases have been returned for analysis, as the choice of methodology depends on the distribution of the data.

All of the above mentioned documents will be subject to revision on the basis of a pilot test of the field procedures. This pilot test is a crucial part of our field preparation because it will determine if our proposed approach is realistic. Changes can be made in the impact variables to be considered, the study report format, or the staffing levels of the field effort.

Once the field staff has begun to return from their site visits, we will begin to draft the individual reports and to finalize the summary analyses. Draft reports will be submitted to the Contract Monitor and to the Project Directors of the sites. Any errors, misconceptions, or omissions that are brought to our attention will be considered in the final editing. The final report will contain the separate case studies, bound together, and a summary section that incorporates the findings of the COP study. This summary is the general impact evaluation of the entire Bureau. Here we will combine the findings of all the case studies, as well as the COP evaluation, to discuss the impact of various strategies, tactics and operational characteristics.

APPENDIX B

CASE STUDY TRAINING MATERIALS

OBJECTIVES OF THE CASE STUDIES

The primary objective is to identify the strategies used by projects to accomplish their goals. From this, we plan to sort out, sift and organize strategies in a way that will help OE make use of the accumulated experiences which the BEPD projects have had over time. OE would like to make of this distillation of the BEPD experiences in planning the proposed renewal sites and other programs with goals related to institutional change or personnel development.

A strategy is a technique for getting a job done.

No strategy can be understood out of context. Therefore, we are interested in the kinds of strategies used by different kinds of projects to accomplish different kinds of goals under different kinds of constraints.

Although we are primarily interested in the strategies used, we are also interested in the goals which have been selected. Sometimes the goal is so nebulous that we are interested in how the project happened to decide on a particular strategy. Thus, for example, the goal of the Educational Leadership program is to train administrators, but the ultimate goal is to shake up the "system" in some manner. The strategy selected by this project will reflect the local definition of "shaking up the system." In such a case, we are interested in exploring the notions of change which are being propagated in the project because that will get us to the strategies. In the case of the Special Education projects, the goal is much less complex and the primary task is to determine how the specific skills are imparted to classroom teachers. In other words, our task is not to evaluate the goals of the project (i.e., Are they being change-oriented enough for our tastes?) but to explore those goals in order to get at the strategies.

The following are some categories of strategies to look for:

1. Organization and management of the project. Some examples of the organizational strategies which we will glean from a detailed description of the operation of the project are:

    a. Open vs. closed structure (Measured by the range of non-project people or organizations with which the project people regularly come in contact)

b. Hierarchical vs. democratic in planning and decision-making (Who makes the decisions and how do they get changed?)

c. Temporary vs. permanent (When the project ends will its functions naturally and normally continue in both the IHE and the LEA or will the whole thing die right there?)

2. Communicating skills and knowledge to trainees. Some of the kinds of strategies we would like to look at that are designed to accomplish this task are:

a. Techniques of teaching (course work vs. practicum, lecture vs. open discussion, testing trainees vs. criterion referenced behavioral standards)

b. Selection of teachers of trainees (graduate students, new faculty, old faculty, master teachers)

c. Selection of the content of skills and knowledge to be communicated to trainees (What do the project directors believe are the appropriate set of skills and knowledges that trainees should have and who helped make that decision?)

3. Trainee selection, screening, recruitment. This task should be understood as more than simply an identification of the procedures used to gather the trainees, although that information is important. We are also interested in how the definition of the particular kinds of trainees as appropriate to the project goals follows from the project director's (or other important persons') interpretation of the project goals.

For example, why are the COP projects filled with a particular kind of person? Why are the Educational Leadership trainees often assistant principals back on the job? Do the project people feel that these kinds of people are the best people to recruit in order to accomplish the goals of the project? Are assistant principals the best people to train as educational leaders? (This question would be directed to all members of the Educational Leadership project.)

4. Establishing relations with the LEAs for:

a. Getting trainees

b. Locating the practicum

c. Supervising the trainees on site

d. Employing and utilizing the trainees-graduates

e. Determining the needs of the school district

The strategies that we would like to look at that are designed to accomplish these tasks are:

a. Full explanation of the purposes of the project vs. little explanation. (How was the explanation given to whom?)

b. Exchange, joint funding, scholarship or other methods of covering the cost of training.

c. Offer of services in exchange for cooperation vs. no service offered. (What services were offered?)

d. Commitment to hire trainees vs. no commitment asked.

e. Utilizing local master teachers for supervision vs. no local people involved in the on-site training.

f. Use of local teachers and other local personnel as a pool for recruitment vs. using non-local people for trainees.

5. Utilizing resources of the IHE. Here it is necessary to define the relationship between a project which is based in an IHE and the IHE. For our purposes we will consider the project as a separate structure which is located somewhere in the university. It may be in a department, in which case the problem is to determine the strategy by which the rest of the department is made to contribute to the project. It may be in a school of education under a specific project officer but not in a particular department. In that case how does the requisite set of skills get pulled together to fit the project needs? Who approves the program offered by the project? Who approves the appointment of new faculty to the project? How does the project relate to these foci of power in the university? Clearly, it is necessary to identify the full range of skills and resources which the project requires to see where in the university those skills are located and to see how they are gathered together and utilized by the project. In several instances, the project will deal with students who would not ordinarily gain entrance to a university, or with faculty who would not ordinarily be recruited as members of the faculty, or with course work out of the ordinary. What are the strategies by which these "deviant" people, or programs are dealt with by the university?

The second major objective of the case studies is to estimate the efficacy of the strategies: How well are they working? Clearly the ultimate criterion is the impact the project will have on children. This is not part of the study, so we will focus on the "process" side of the strategies, i.e. are they doing what they are supposed to be doing? There are two ways of searching for data to answer this question.

1. Ask the project people. This refers to the general questions to be asked of all project people. Questions have to be designed to get at the efficacy of the strategies. They have to be defined in the context of each project, but they ask each respondent if the techniques of achieving his goals are working.

2. Look at the operation of the strategies ourselves. We want to know if there are any apparent strengths or weaknesses to the strategies. Are there any apparent alternatives to the techniques that are being used locally? If there are, try to find out why the alternatives were rejected in favor of the accepted strategy. BUT DO THIS WITHOUT IMPLYING THAT THEY ARE WRONG FOR NOT USING THE ALTERNATIVE.

   Criteria for estimating the efficacy of the strategies: Clearly if we are to look at the strategies in order to estimate how well they are working, we should have some criteria for making the estimate. There are at least three central criteria:

   a. The understanding of the meaning, intent and operation of the strategy by the people to whom it is applied.

   b. The agreement with the intent and manner of operation of the strategy by the people to whom it is applied.

   c. The cooperation with the strategy by the people to whom it is applied.

Since there are several strategies in each project, and each project has a different set of strategies, it is not appropriate here to discuss the operational definitions of these criteria at this point. We will ask the team members of each project to be prepared to discuss the content of the criteria for the efficacy of strategies at the Thursday meeting.

Some Selected Issues for Careful Attention

Each of the following issues will be the basis of comments you will be asked to make on your project. In each case you will be asked to refer to data upon which you have formed your opinion. Further, you will be asked to confer with your partner on the visit to agree on a rating of the project, utilizing a scale based upon these issues. These ratings will be one way of categorizing the projects for purposes of analyses. These are simply indicators of the type of material that may be included in the rating scales. Final versions of the scales will be provided after your visit to the project.

1. Efficacy of the strategies:

	Criterion	Source of Data	Rating
a. Understanding			
b. Agreement			
c. Cooperation			

2. Organizational properties of the project to be rated:

   a. Open vs Closed

   b. Hierarchical vs. Democratic

   c. Open communication vs. Closed (one way)

   d. Temporary vs. Permanent

3. Innovativeness scale:

   a. Resistance to change

   b. Discrepancy of the goals of the project from the on-going state of affairs in the institution before change (minimum change is movement from a zero situation to something.)

4. Configuration

   Resources for the project must be gathered from widely divergent disciplines, places, people vs. all the resources for the project are concentrated in the project.

5. Intrinsice to the (IHE or LEA) vs. Ad Hoc to the institutions:

   a. How far, in terms of power, is the project from the objects to be changed?

6. Communality of perceptions across project director-teaching staff, teaching staff-trainees, project director-LEA in terms of:

   a. Desirablitiy of change

   b. How big a change is required

   c. Adequacy of strategy and substance of training

7. Readiness of (IHE-LEA) to change:

   a. Are they responsive (did they intiate the project, utilize graduates fully, etc.)?

8. Relevance of the training strategy for change:

a. Is impact of change by LEA or IHE assessed by project?

b. Is "change" a part of the curriculum? Are the trainees clearly prepared for the consequences <u>if</u> they act as change agents?

c. Are the trainees prepared to deal with the real world or is the world they will deal with a construction of the project people?

9. Are the senior actors:

a. Change oriented or service oriented? Do they want to change the "system" and supply new people for the new roles or do they want to accept the "system" and supply new people for the almost old roles?

10. Are the senior actors Elites:

a. Substantively? Do they know how to make the changes? Are they opinion leaders? Do they believe in a model? Are they symbols of something or are they simply trainers?

b. Organizationally? Do they have particular power or access to power?

11. Are the trainees Elites?

a. Do they see themselves as shock troops?

APPENDIX C

ANNOTATED BIBLIOGRAPHY

ANNOTATED BIBLIOGRAPHY

THE PLANNING OF CHANGE, Warren G. Bennis, Kenneth D. Benne, Robert Chin, eds. New York: Holt, Rinehart & Winston, Inc., 1969 (second edition).

Chris Argyrès, 1961, "Explorations in Consulting-Client Relationships."

Uses notes of consultants on two case studies to illustrate some principles and observations: the consultant is a marginal man in an organization "because he will work in a system whose values and norms are different from those of his own team."

The consultant will probably encounter the following problems: (1) "Although he accepts the management's request to conduct diagnoses of the employees' world, the employees may choose not to inform him about the very problems he is supposed to help resolve." (2) Management may not inform him of activities carried out informally, although these may be the source of some organizational problems. (3) The consultant will be between conflicting subgroups which may ask him to support one side or the other. (4) He will be frustrated by fluctuating decisions, norms, etc. of both groups. (5) He will be frustrated by the incongruence of his values with either group.

A consultant must not yield to the pressure, even temporarily, to accept the client's values: if the consultant does not behave openly, authentically he reinforces the client's resistance to such behavior and supports that norm. The consultant must remain free to terminate his relationship if the situation demands that the management take such steps as engaging in therapy and they will not do so; he must also operate without fear of termination, otherwise the client is in control of the consultant.

Kenneth D. Benne, Max Birnbaum, "Principles of Changing."

Relying on the Lewinian model of unfreezing, moving, refreezing, or a dynamic approach to change, the authors refer to the balance or imbalance between the sum of the forces restraining change and the sum of the forces driving change. In upsetting the equalibrium, three major strategies are suggested: the driving forces may be increased, the restraining forces may be decreased, these two strategies may be combined. On the basis of this model, some principles of strategy are offered; some of these are: "To change a subsystem or any part of a subsystem, relevant aspects of the environment must also be changed." "To change behavior on any one

level of a hierarchical organization, it is necessary to achieve complementary and reinforcing changes in organization levels above and below that level." "Both the formal and the informal organization of an institution must be considered in planning any process of change." "The effectiveness of a planned change is often directly related to the degree to which members at all levels of an institutional hierarchy take part in the fact-finding and the diagnosing of needed changes and in the formulating and reality-testing of goals and programs of change."

Robert Chin, Kenneth D. Benne, 1967, "General Strategies for Effecting Changes in Human Systems."

Treats "conscious, deliberate, intended changes, at least on the part of one or more agents related to the change attempt." Claims one element essentially in all approaches to planned change: the "conscious utilization and application of knowledge as a . . . tool for modifying patterns and institutions of practice"--the knowledge may be of non-human environment (technological) or may be behavioral knowledge. Suggests three categories of change strategy. (1) empirical-rational; fundamental assumptions: (a) "men are rational;" (b) "men will follow their rational self-interest once this is revealed to them." In the following areas, the application of technological and rational is of paramount importance for this approach; the chief foes are ignorance and superstition: basic research and dissemination of knowledge through general education, personell selection and replacement, systems analysis and consultation, applied research and linkage systems, utopian thinking as a strategy of changing, clarification of language. (2) normative-re-educative; "rationality and intelligence are not denied . . . . Patterns of action and practice are supported by sociocultural norms and by commitments on the part of individuals to these norms. Sociocultural norms are supported by the attitude and value systems of individuals. Change . . . will occur only as the persons involved are brought to change their normative orientations to old patterns and develop commitments to new ones. Change in normative orientations involves changes in attitudes, values, skills and significant relationships, not just changes in knowledge, information, or intellectual rationales for action and practice." It is emphasized that the relation between man and his environment is essentially transactional; "intelligence is considered to be social, rather than narrowly individual; man must participate in his own re-education, which is normative as well as cognitive;" two functions stressed for this approach are "improving the problem-solving capabilities of a system, and releasing and fostering growth in the persons who make up the system to be changed."

(3) power-coercive; "compliance of those with less power to the plans, directions, and leadership of those with greater power." "In general, emphasis is on political and economic sanctions in the exercise of power. There is an attempt "to meet political and economic power behind change goals which the strategists of change have decided are desirable. Those who oppose, if they adopt the same strategy seek to mass political and economic power in opposition. The strategy thus tends to divide the society when there is anything like a division of opinion and of power in that society." Included under this category are "strategies of non-violence, the use of political institutions to achieve change, changing through the recomposition and manipulation of power elites."

Charles K. Ferguson, "Concerning the Nature of Human Systems and the Consultant's Role."

Details special skills, functions of consultants, including: helping a system "externalize," "explicating non-fit between interfaces," initiating momentum of change forces, gathering data from all levels, encouraging sense of project, becoming a communications link, clarifying issues, taking calculated risks because of his expendability.

Ronald G. Havelock, Kenneth D. Benne, 1966, "An Exploration Study of Knowledge Utilization."

Concerned with how to move from accumulated knowledge to its utilization [cf., Lippitt--same problem; Chin and Benne--knowledge as tool]. Exemplary systems cited: AT&T, Agricultural Extension Service. "Can the same processes be introduced into other areas of action and practice where quality and quantity of information differ, where goals are less specified, and where vastly differing organizational patterns prevail?" [cf., Carlson, "Barriers to Change in Public Schools"--"weak knowledge base"] Distinction made between utilization as system or process, synthetic model offered. System: uses concepts such as "organization," "group," "person," "agent," "position," "role," "channel," and "link;" has a flow-structure (info-carrying system), which is supported and controlled by an administrative structure. Flow structure: barriers--"defining and identifying limits of any group and the differences between the frame of reference of the sender and the frame of reference of the sender." Units of information: "Substance of knowledge being transmitted, eg., idea observation, working model, etc.; also, requests, questions, demands, etc." Model is of need, provision, feedback--whether individuals or groups. "The simplest chains which involve only a few resource persons and hence few barriers

are continuously in danger of overloading, particularly where complex messages requiring many units of information are involved. Complex chains which contain many resource persons in separately defined roles tend to reduce the pressure on any one member, thereby reducing the danger of overloading. However, the addition of each new member means that the information must flow through additional barriers. The problem of the proliferation of barriers is somewhat alleviated when the system makes effective use of the principle of "exclusion" (of new members into existing organization--both formal and informal). Administrative structure: five areas (a) education: basic and practice roles currently emphasized at expense of development and consumption roles, recruitment emphasized at cost of continuing education. (b) financial support--amount of money as well as manner of allocation: reliable, stable, and without limit to, say, "pure science," which limits destroy linkages. (c) control--should control (establishment of goals, coordination of resources toward achieving goals) lie with those involved ("on-line") or with someone who could more easily be objective, have overview. (d) protection--managing group discreetness, licensing, copyrighting, etc. (e) change--uses concepts such as "relationship," "linkage," "transfer," "exchange," "translation," "diffusion," "communication;" is useful for assessing in detail occurrences at exchange points or linkages in the flow structure. Three features of process of utilization: (1) motivation--client needs: origin, communication of them. (2) interpersonal and group membership issues--permeability of barriers is a function of these properties: rigidity, durability, interconnectedness and visibility; causes of more or less permeability are age and education levels, geographical separation, cohesiveness (psychological distance), perceived external threat (self-preservation); boundary conditions that create problems for utilization are status differences and value differences (some of latter which create conflict among senders and receivers in utilization process: general vs. unique; orientation to past, present or future; unitary vs. pluralistic; man vs. nature; elegance vs. practicality; handwork vs. brainwork; autonomy vs. dependence; value cherishing vs. value rejecting stances). (3) technical issues--preparation of message, transmission of message.

Synthetic program suggestions for utilization: search for hypothesis but cannot test the hypothesis without the criteria or to decide on appropriate dependent variables--most important suggested criteria are life-saving and life-preserving needs as fundamental to building a schema of utilization because these offer the broadest value base for common criteria.

Donald Klein, 1966, "Some Notes on the Dynamics of Resistance to Change."

In favor of opposition and resistance to change--"Freud . . . pointed out that without resistance patients might be overwhelmed by the interventions of the therapist, with the result that inadequate defenses against catastrophe would be overthrown before more adaptive ways of coping with inner and outer stimuli had been erected." Similarly, says Klein, with complex social systems: resistance is likely not irrational but instead "an attempt to maintain the integrity of the target system to real threat, or opposition to the agents of change themselves." Change is a process over time. Antipathy to change agents derives from lack of particulars by those affected by the changes. ". . . Successful innovation occurs only after initial resistances have been worked through." [Contrary to Gross] In stable groups the marginal or atypical person is most likely to be receptive to new ideas--he can afford the risk. "Thus it has been found [?] necessary to carry out sustained efforts at innovation in which experimentation with new ideas can be followed by efforts at adapting or modifying them to fit more smoothly into existing patterns until finally what was once an innovation is itself incorporated within an altered status quo." Major thesis: "a necessary prerequisite of successful change involves the mobilization of forces against it." Opponents are: (1) most likely to see real threats to their system, (2) most likely to defend system's integrity, (3) sensitive to change agents' misunderstanding of central system's values. Defender, change agent must be sympathetic to each other's role. Sees superintendant as the one to impede or encourage change--recognizes, à la Gross, the mediator role of superintendant; suggests the superintendant's function is to create the "conditions wherein the interplay between change agents and defenders can occur with a minimum of rancor . . . ."

Ronald Lippit, 1965, "The Process of Utilization of Social Research to Improve Social Practice."

Presents three patterns of research utilization: (1) "the scientist consultant in collaboration with a practitioner or practice group identifies and defines a problem of practice"--here, the organization contracts with the scientist team to collect diagnostic data relevant to some problem, analyze data, make it available to organization members for their use. [An example would be Miles' "survey feedback."] (2) this pattern "entails conducting an extra-system feasibility test of a design procedure to meet some social practice issue"--the consultants supervise the organization members in changing themselves, learning how to collect their own data, interpret the findings, develop the implications. (3) this is the process of presenting for evaluation and

understanding by one group of practitioners the innovations being implemented by other practitioners in the same field but physically remote. [An example is PSSC adoption.] Here, the assumption is that the practitioner needs to develop the skills of locating resources in order to utilize those resources. In all three patterns, the consultant or researcher is viewed as a linking agent.

Matthew B. Miles, et al., 1966, "The Consequence of Survey Feedback: Theory and Evaluation."

Cites work showing innovativeness to be a function of organizational characteristics rather than personality characteristics. Refers to works stressing "technologies for planned change designed to increase the accuracy of internal communication, increase upward influence of subordinates, . . . aid problem-solving adequacy of administrative teams, etc." "System health characteristics" include ability to flexibly adapt both to accommodate internal and external exigencies. "Dimensions of 'organizational health' . . . are . . . those concerned with task accomplishment, those concerned with internal integration, and those involving mutual adaptation of the organization and its environment." Describes technique or means by which organizational health can be promoted; namely, survey feedback which "is a process in which outside staff and members of the organization collaboratively gather, analyze and interpret data that deal with various aspects of the organization's functioning and its members' work lives, and using the data as a base, begin to correctively alter the organizational structure and the members' work relationships."

Herbert A. Shephard, 1967, "Innovation-Resisting and Innovation-Producing Organizations."

Concerned with (A) innovation in resistant organizations--innovative ideas most likely to occur to persons familiar with the situation, hence, some distance from power source, but are dependent on power holder's support (necessary but not sufficient) for success: what strategies for circumventing this approach? (1) concealment (for protection until support is amassed--inside and outside); (2) ability to propose the innovation as relief in an organizational crisis situation. (B) innovation in supportive organizations--organizations must overcome the tendency toward programmed responses, organizing to accommodate innovative, unprogrammed activities. One characteristic of such organization suggested is periodicity; eg., "adapting organizational form to suit the require-

PERSPECTIVES ON EDUCATIONAL CHANGE, Richard I. Miller, ed., New York, Appleton-Century-Crofts, 1967.

Henry M. Brickell, "The Role of Local School Systems in Change".

Offers a diagrammatic model for how local school systems can bring about change in their own classrooms. [Is concerned with information dissemination and utilization-]. It is claimed the model has equal applicability to the relation between a teacher and a single student. The model represents a set of functions rather than a set of agencies. Thus the "role" of the local school is a function; that function includes the following: to interact with the outside community in the choice and precise definition of desired student learning; to select an instructional program to achieve an objective, to try it out, and if it is unsatisfactory, search for a better one. In short, the local school system is a laboratory. The article deals in some detail with the origin of the goals decided upon by the school in collaboration with the board of education (goals derive from man and his membership in society), apparent universality of goals is attributed to mobility of teachers and others; the broad goals supplied by the board are made explicit and specific by the professional staff; the goals must be changed to keep pace with shift over time of social requirements; local school systems are likely to need specialized outside help in refining instructional goals. "The instructional goals of local school are...given to it from outside through the mechanisms employed by the people to support and control the public schools, with the staff participating through interacting with these mechanisms". Once the goals exist, the school must select an instructional program to implement that goal-where does the program come from? This is the central focus of this article. The question is raised "because it arises when the school system turns to the set of known possibilities-the set of alternative instructional programs which are functionally available to it-and decides whether to modify a program it is currently using, or to create a wholly new one on its own initiative or to adopt or adapt an outside program". Discusses requirements of creation of "distinctive, high-quality"instructional program: much time, talent, money-in circumstances differing from and outside of operating schools. Cites PSSC as classic example; Dewey's experimental school, campus lab schools, etc., to substantiate his point that special circumstances [demo schools, temporary systems] are required for development of testing of wide variety of feasible new instructional programs. Suggests an ideal model of a research and development sequence in which outside agencies, in response to expression of need by local schools will develop what appears to be a feasible instructional program. The program will also be tested in limited ways by that agency; it will then be tried in a controlled school setting; the agency wil correct the seasoning, send the program back and on to another school with suitable conditions to test for cost, etc., the results will determine whether the program is effective. Next step:dissemination to other schools. Claim: every local school must be matched by an outside enabling agency. Both developer and local school

ments of the task at a given phase of innovation." Suggests some organizational responses: openness to diversity at one time, singleness of purpose, functional division of labor, discipline, et., at another time. Another example of periodicity is the use of temporary systems, and as special task forces or committees. Claims the members of an innovation-producing organization evidence certain characteristics, among which are creative but practical imagination, psychological security and autonomous nature, etc. Observes a supportive "environment is difficult to maintain because it is at variance with traditional management doctrine." "Successful innovators are often marginal to the organization; . . . their basis of self-esteem is somewhat independent of organization values as expressed in its reward/punishment system." (C) "Innovations which help an innovation-resisting organization become an innovation-producing organization"--we need to change our values and skills in order to "develop the qualities of independence and capacity for autonomous interdependence . . . ." (!)

Goodwin Watson, 1966, "Resistance to Change."

"All of the forces which contribute to stability in personality or in social systems can be perceived as resisting change." The more productive innovation "requires through every stage perceptive analysis of the nature of resistance." Lists forces of resistance in personality and in social systems--"the two work as one"--personality: homeostasis, habit, primacy, selective perception and retention, dependence, superego, self-distrust, insecurity and regression; in social systems: conformity to norms, systemic and cultural coherence, vested interests, the sacrosanct, rejection of outsiders. Derives from these same principles (how these principles are "derived" is a mystery). Resistance will be less: if participants feel the project is their own, if project has support from management, if participants see change reducing rather than increasing burdens, if project accords with values of participants, interests them, does not threaten them, is the result of their participation, is adopted by "consensual group decision," if feedback mechanisms exist, if the participants can be enabled to function openly with each other and if the project is open and flexible to modification.

must assume responsibility for assessing an available program; the local school should have as clear a notion of goals as possible, to facilitate development of specialized programs.

PERSPECTIVES ON EDUCATIONAL CHANGE, Richard I. Miller. New York: Appleton-Century-Crofts, 1967.

Wailand Bessent, Hollis A. Moore, The Effects of Outside Funds on School Districts.

The thesis of this article is that the receipt of outside funds in a school district has an effect similar to that of the implementation of an experimental project within a particular school: i.e., the organization itself is changed in some ways. The authors contend that the effect of project or funds is not frequently the focus of study (reference is made to Matthew B. Miles, "Planned Change and Organizational Health: Figure and Ground," in Change Processes in Public Schools, R. O. Carlson, ed.). It is pointed out that three characteristics of such funds "are important determiners of later events": the funds are outside, temporary, and restricted (to a particular project).

The data of this article are based on observation of two projects in which the authors were involved. There is discussion of some complications which arise when the attempt is made to implement a new project. The projects came from another setting; thus, the outcome of the project was set in advance. However, the procedures for attaining the outcome were unclear and required invention on the part of those involved in implementation. Since the point seemed to be demonstration rather than change, difficulties arose: "...Freedom to change is antithetical to demonstration, which needs careful control of factors."

The authors claim that non-local funds are especially important in the planning stage of an innovation attempt, since few organizations budget money for experimentation and money is required to explore a variety of possibilities before one is chosen to implement.

There are difficulties which arise when the attempt is to provide change throughout an entire school district: whether to allot money to a few selected schools to fully develop the project, or whether to give out the money to all schools, knowing that there will be insufficient amounts for the project; how to carry the project on once the funds are used up; whether to control the project from the superintendent's office or to grant local autonomy.

Four strategies are discussed: (1) maintain control over the project at the director level and seek commitment in existing organizational structure; (2) maintain control at director level, but create temporary structures that will operate outside existing structure to provide successful models; (3) shift responsibility for developing change to operating level, but does so through existing structures; (4) operating level is given autonomy for developing the project and this may be done through creation of temporary structures. The problems enumerated by the authors persuade them that "foundations cannot be effective in demonstrating comprehensive program changes in public schools but should confine their efforts to supporting

free-searching innovative efforts in districts where they are spontaneously occurring." It is, finally, suggested that "sizeable grants over longer periods of time, given to districts with a history of innovation for use as risk capital, might yield better results." This, of course, means that the authors do not see any means of inducing change in institutions which do not already display some innovativeness, nor does the introduction of outside funds appear to make any difference in non-innovative institutions' behavior.

Ronald Lippitt, et al., The Teacher as Innovator, Seeker, and Sharer of New Practices

The premise of this article is that "the innovation and spread of high quality teaching practices is a different process from the spread of new developments in agriculture, medicine, and industry." The difference is claimed to be that in the latter, the adoption is of some thing, which can be objectively evaluated and distributed for use; whereas, "in an applied social science field, such as education, the new invention is usually a pattern of human behavior, i.e., a new way of behavior toward a group of young learners." Therefore, the adoption cannot be made by passing along this thing; rather, the practice must be compatible with existing values, attitudes and behavioral skills of the potential adopter. It is pointed out that the teacher is a member of a complex social system, including not only the administration and students but colleagues and parents as well. Because of this intricate social system, the teacher requires "more commitment, risk taking, and help from others than is true in the other fields of practice." The authors pose such questions as "What are the sources of assistance for the teacher in this learning process? How can we know whether this assistance is effective or not? What are the bridges connecting a teacher with the relevant resources he needs to improve his performance as a professional educator?" It is claimed that there were discovered two different types of bridging processes linking teachers to new resources and supporting their improvement efforts: questionnaires and other instruments connect the teacher with the knowledge and methods of the behavioral sciences, and bringing teachers together enables them to assist one another. The authors sought the teachers' opinions on what they considered important aspects of the adoption process. The results included: the characteristics of the innovation itself make it more or less attractive; the physical and temporal arrangement of the school building and school responsibilities; nature of peer social relationships; teacher-principal relationships; norms and standards for professional behavior; and the organizational climate of the school system. Using just one of the above characteristics to illustrate the authors' findings: "the classroom practice must be seen as relevant and helpful to the teacher in achieving his goals in the classroom; the practice must be seen as relevant and appropriate to the teacher's own personal style of classroom management." Such a conclusion ignores the data that point out that the teacher is not a free agent to innovate within the classroom. It also leaves open the question of whether a teacher may defeat

innovation efforts simply because it does not suit him. The authors further state, "Many of the most significant innovations occur behind closed classroom doors and are not documented, validated, or shared." One might question the significance of something referred to as an innovation if it is, in fact, applied on so limited a scale.

Ruth E. Chadwick, Robert H. Anderson, The School Reorganization Project in Newton, Massachusetts

This article is a report on the efforts of innovators in two Newton elementary schools to "deliberately set out to attain not only a theoretically ideal organizational pattern but also a high degree of reform and improvement in the curriculum and in teaching practices." In the literature of school innovation, this article is important because it indicates, through the discussion of the actual procedures followed and the problems encountered, the significance of items discussed in more theoretical articles. Some of the strategies employed in the attempt to adopt and implement team teaching, and non-graded classrooms were: frequent workshops and meetings between all of the faculty, and occasionally with the parents, to discuss particular or general problems met in any area; widespread familiarization of the faculty with the literature on previous attempts to adopt and innovate these practices, and visiting of faculty with other schools where these practices were being employed; time allotted to teachers for their study and experimentation with the innovations; the use of outside assistance in the form of consultation from Dr. Anderson of the Harvard School of Education; trial of the innovations for limited times in limited parts of the schools, with reports and evaluations following immediately; the opportunity to utilize a new and flexible physical structure; strong and active support from the community and from the administration; outside funds from the Ford Foundation; the presence of an able and respected administrator who applied herself to the task of supporting the faculty in every way. There is apparently every reason why such an attempt should succeed. . . and why such an opportunity is limited to few schools.

Philip K. Piel, Terry L. Eidell, eds., Social and Technological Change, Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1970.

This book is useful as an overview of the literature in several areas of the study of education. These areas, dealt with as separate chapters, are: social change and the projected role of the schools; the development of teacher militancy and the implications for schools in the future; the application of systems theory to the study of education; systems analysis and the planning of schools; educational management information systems. The articles deal with the most recent work done in each of these areas, and attempt to tie together the various and varying points of view or applications advocated, pointing out the strengths and weaknesses of each approach and where it appears that further studies are needed.

THE DYNAMICS OF PLANNED CHANGE, Ronald Lippitt, Jeanne Watson, Bruce Westley. New York: Harcourt, Brace & World, 1958.

This book treats change almost exclusively as something originated without the system itself. The initiation of change, almost without exception, is the purview of change agents; hence, the book spends a fair amount of time discussing the training of professional change agents, and detailing the tasks the authors perceive to be the necessary ones for those agents of change. That the book tends to rely less heavily than one might prefer on the empirical evidence available on the various topics of the change process -- whether initiation should or should not include the participation of the subordinates, whether change agents are in fact absolutely necessary for organizational change to occur -- is perhaps due to the date of the publication. The emphasis on theory of change, on approach, rather than on the specific, tested strategies is no longer au courant in change literature. Nor is the assumption of the necessity for any particular strategy of much use; whether that strategy is the use of change agents or some other strategy.

One contribution this book makes to the literature on change is its emphasis on the human responses to change attempts. As already mentioned, the book's reliance on empirical data is limited; however, perhaps for that very reason, it does not treat the subject of change as one in which "units" are the ubiquitous topic of discussion. In this book, one knows that it is other human beings who are the focus of the change process and, consequently, the approaches suggested take this into account.

Richard O. Carlson, Adoption of Education Innovations. Euguene, Oregon: Center for the Advanced Study of Educational Administration, 1965.

Carlson's study is based on the assumption that "the rate of acceptance of a new practice or idea by individuals or adopting groups depends on (1) the characteristics of the adopting unit (individual and/or group); (2) the way the adopting unit is joined to communication channels and sources of information; and (3) the position the adopting unit holds in the social structure of like units." (p. 5) Carlson also relies on the model of communication flow known as the two-step process, where information received by those in higher social or organizational positions filters down to those in lower positions. Further, "the two-step flow hypothesis suggests that mass communication messages are mediated by the reference group of the recipient and the social structure in which they are imbedded." (p. 5) This is to say that a school superintendent, for example, will respond not to the message he receives or the information available on an innovation, but rather to the responses of those whom he sees as important to him. Adoption is considered a chain reaction process which is initiated by those high in the social structure of, say, school superintendents. It is the school superintendent who is the focus of this study because Carlson considers him to be at the focal point of the decision process in a school system. The study details the character-

istics of those school superintendents who appear to be the first to adopt innovations, and the manner in which their adoption is diffused from superintendent to superintendent throughout the social structure of superintendents. Particular innovations were studied, including modern math and programmed instruction. One interesting conclusion: the fact that a superintendent adopted programmed instruction did not necessarily lead to the adoption of that innovation at the school level.

Neal Gross, Joseph B. Giacquinta, Marilyn Bernstein, Implementing Organizational Innovations. New York: Basic Books, Inc., 1971.

It is the contention of the authors that the studies made, prior to their book, on innovation adoption have (1) treated the major problem as overcoming initial resistance to an innovation; (2) treated adoption as an individual matter, with the individual free to accept or reject an innovation regardless of the organizational requirements; (3) relied on adoption as a measure of success instead of studying attempts to implement the innovation; (4) treated adoption as an event rather than as a process occurring over time. The authors point out, in an excellent review of the available literature on innovation adoption, that a number of additional assumptions have been made which, combined with the procedurally weak evidence relied on, resulted in quite a lot of indefensible claims about the necessary conditions, procedures and strategies for achieving innovation adoption.

The authors use a case study of their own to illustrate their contentions and to provide evidence for their conclusions and caveats to those wishing to study further the process of innovation adoption. Finally, the study states: "...The degree to which an innovation is implemented will be a function of the extent to which five conditions are present during the period of attempted implementation." These conditions are: (1) the members of an organization (the ones directly involved in the implementation procedure) must be clear about the innovation; (2) they must have the capabilities of carrying out the innovation; (3) the innovation must be compatible with the existing organizational arrangements; (4) the materials required for the implementation must be available; (5) the staff must be willing to spend the time and effort required for the implementation. (p. 202-03)

Everett M. Rogers, F. Floyd Shoemaker, Communication of Innovations. New York: The Free Press, 1971.

The authors treat innovation adoption as something which refers to an individual process, whether the individual is acting on his own or as a member of an organization. It is claimed that the individual goes through four stages in the process of adoption: (1) knowledge (where the individual is exposed to the innovation and gains some understanding of it); (2) persuasion (the person forms some attitude toward the innovation); (3) decision (the individual engages in adoption activities

or rejects the innovation); (4) confirmation (the person seeks reinforcement for his decision, though he is still free to reject the innovation).

It is the authors' position that social change occurs as the result of incremental steps of innovation adoption. "Consequences are the changes that occur within a social system as a result of the adoption or rejection of the innovation. Change occurs when a new idea's use or rejection has an effect." (p.7) Innovation is defined as "an idea, practice, or object perceived as new by an individual." (p. 19) Clearly, then, whether an idea is new for those outside a situation does not matter: if the idea is new for the person in the situation, then that idea is innovative. There are chapters on the role of the change agent; on the characterisitics of the innovations themselves necessary for any innovation to be considered (relative advantage, compatibility, complexity, trialability and observability); on the categories into which those seen as adoptors can be placed (e.g., innovators, early or late adoptors); on the necessity of communication channels being sufficient to allow feedback; and on the relative merits of collective and authority adoption decisions; there is also a useful list of the generalizations the authors make throughout the book appended to the end of the book. Unfortunately, because the authors treat innovation adoption as an individual event and not as a process over time taken by a group or an organization, their work is not as directly applicable to organization change as one might wish.

Peter M. Blau, W. Richard Scott, Formal Organizations, San Francisco: Chandler Publishing Company, 1962.

The authors deal with the standard information concerning organizations; however, it is their claim that a comparative approach to the study of organizations may yield some information unobtainable by the case study approach: "It will be possible to . . . make comparisons between several of the case studies of formal organizations in the lit. . . .between those studies that make comparisons between internal parts of an organization, departments, for example. We can compare the few attempted comparative studies of the organization of work in primitive societies (e.g., Udy)." (p. 25-6)

The particular contribution of the book appears to lie in its treatment of the organization as a system in relation to what the authors refer to as "publics." Consideration of this aspect of the organization allows the authors to recognize that the public may react to the treatment received from an organization by organizing itself. Also considered as an important aspect of the organization is the way in which the workers order themselves informally. Some attention is also paid to the social environment within the organization in terms of the way the organization's structure affects the lives of the workers, in the fashion of Goffman's study (Asylums). Of particular interest to anyone reading this book with the intention of applying its information to the study of schools is the discussion, in later chapters, of the relation between bureaucratization and professionalism. The authors conclude with a brief discussion of the "dialectical" nature of conflict and change in organizations. They quote Mary Parker Follett as saying, 'When we think that we have solved a problem, well, by the very process of solving, new elements or forces come into the situation and you have a new problem on your hands to be solved.' This comes very near to recognizing the applicability of the systems approach to organizational change, in that no one element of an organization is independent of an other, nor is the organization apart from the environment -- the public -- with which it exchanges material, employees and so on.

CHANGE PROCESSES IN THE PUBLIC SCHOOLS, Richard O. Carlson, et al., Eugene, Ore., Center for the Advanced Study of Educational Administration, 1965.

Richard O. Carlson, Barriers to Change in Public Schools.

It is Carlson's contention in this article that there are principally three aspects of public schooling which act as barriers to change. These are: (1) the absence of an institutionalized change agent; (2) a weak knowledge base; and (3) "domestication" of public schools.

The definition of "change agent" offered is, "a professional who has as his major function the advocacy and introduction of innovations into practice." Regarding the weakness of the knowledge base, Carlson considers the exemplar of an ideal model to be the U.S. agricultural experimental stations, where new innovations are tested thoroughly with assistance from local experimentors, the data are collected, and are available to all locations along with technical assistance in implementation procedures. Carlson claims that a similar procedure would minimize the time lag between theoretical innovations in education and their application. By "domestication" Carlson means that the public schools have become complacent in their lack of efforts to provide change because they do not have to compete against other organizations for their "clientele"; thus, there is not the loss of revenue or the reduction of operations if nothing is done to provide better service: with the public schools, "better" can mean just better than last year--which, in most instances, is dismal.

Matthew B. Miles, Planned Change and Organizational Health: Figure and Ground.

The author's thesis is that the studies on innovation diffusion (Rogers) and organizational change (Lippitt; Bennis, Benne, Chin) have tended to concentrate their attention on the innovation of the new practice he contends, ignores the possibility of gathering information about the probability of effective change from the health of the organization itself. Miles treats the difficulties of the application of the concept of "health" to organizations. His conclusion is that a healthy organization is one that not only survives within its environment but does so by continuously developing and extending its surviving and coping capabilities. He lists ten dimensions of organization health which "sound plausible" to him: (1) goal focus; (2) communication adequacy; (3) optimal power equalization; (4) resource utilization; (5) cohesiveness; (6) morale; (7) innovativeness; (8) autonomy; (9) adaption; (10) problem-solving adequacy. In examining the appropriateness of these ten dimensions to the school organization, Miles concludes that the schools present peculiar organizational problems: (1) goal ambiguity; (2) input variability; (3) role performance invisibility; (4) low interdependence; (5) vulnerability; (6) lay-professional control problems. Listed in conclusion are six possible appraoches to the induction of organization health: (1) self-study; (2) relational emphasis; (3) increased data flow; (4) norms as a target change; (5) temporary system approach; (6) expert facilitation.

Everett M. Rogers, What Are Innovators Like?

Rogers defines "innovators" as, "the first members of a social system to adopt new ideas." Some generalizations are offered about the nature of those who are referred to as innovators: they are young; of relatively high social status, in terms of amount of education, prestige ratings, and income; depend on impersonal and cosmopolite

sources of information; expert opinion leadership; are likely to be viewed as deviants by their peers and by themselves. Rogers claims that the following implications derive from his paper: high relationship between the financial resources of the school system and its innovativeness; social characteristics, relationships, and communication behavior of the members of the school staff relate to the innovativeness of the members of the system; the teacher and the school system have a reciprocal relationship in the effecting of change in schools; the absence of change agents in schools may be a factor in the relative slowness of innovativeness in schools.

THE PLANNING OF CHANGE, Warren G. Bennis, Kenneth D. Benne, Robert Chin, New York: Holt, Rinehart, Winston, 1969.

Kenneth D. Benne, Max Birnbaum, Principles of Changing

This article begins with an acceptance of Lewin's model for change (unfreezing, moving, freezing), upon which their own model is predicated. Their model refers to "restraining forces, present level of production, and driving forces." The first and third forces are in tension against each other, maintaining some level (the second). Efforts to effect change reduce the tension by either increasing the driving force or reducing the restraining force; the latter is recommended. Several generalizations are offered: "To change a subsystem or any part of a subsystem, relevant aspects of the environment must also be changed." "To change behavior on any level of a hierarchical organization, it is necessary to achieve complementary and reinforcing changes in organization levels above and below that level." It is urged by the authors that attempts at change be begun at those points in an organization where there is some stress, but not at the point of greatest stress (no evidence is adduced in support of the statement). "If thoroughgoing changes in a hierarchical structure are necessary or desirable, change should ordinarily start with the policy making body." Both the formal and the informal aspects of the organization are recognized as important in any attempt at change. It is further claimed that "the effectiveness of a planned change is often directly related to the degree to which members at all levels of an institutional hierarchy take part in the fact-finding and the diagnosing of needed changes and in the formulating and reality-testing of goals and programs of change." Again, no evidence.

James V. Clark, A Healthy Organization

It is this author's intention to provide the reader with a picture of organizational health, albeit the author's own. Health is held to be an organizational state which permits the maintenance of both the status quo and the promotion of growth. Just how these two apparently contradictory features of organizational operation are to be simultaneously realized is claimed to be as follows: "the healthy organization must afford groups as well as individuals chances to fulfill their tendencies and capacities for equilibrium and growth. It must do this for the individual, for small groups, for inter-group

relationships and for the total organization." Little more clarification or operational information is provided, however. The author asserts that much of the literature on organizational systems has tended to deal either with the reactive or "proactive" aspects of the organization; Clark asserts both are important in understanding properly the operation of a system. "Proactive" is defined as that "behavior which is forward-pushing, growing, striving, learning, becoming." A case study of an organization is offered as illustration of the author's point of view.

INNOVATION IN EDUCATION, Matthew B. Miles, ed. New York: Teachers College, 1964.

Donald C. Plesche, Nicholas A. Masters, Thomas H. Eliot, 1964, "The Illinois School Problems Commission: An Innovation in Decision-making at the State Level."

Emphasis on political nature of public schooling; illustrates with description of establishment and functions of the School Problems Commission how state-level education decisions can be made to provide "progress without significant controversy." The Illinois School Problems Commission is used as an illustration because it is a state-level commission and Plesche, et al, explains: Recently the state government's authority, share of financial support, participation in or power to make decisions on manner and time of election of school boards, teacher welfare, school reorganization, auditing of local district's fiscal arrangements has increased considerably. For this reason, the authors claim local autonomy of schools is mythological. The Illinois School Problems Commission functions at the interface between local school decisions and needs, and state political legislation and supplies. School Problems Commission was established (1957) for three reasons: (1) Existing diffuse decision-making arrangements no longer adequate to meet the complexity of problems; (2) State legislature would not establish a state board of education but were aware of their own lack of educational expertise; (3) state superintendent is partisan appointment, non-education leader. The School Problems Commission includes seventeen members, ten of whom are legislators. School Problems Commission's tasks are to study "(1) Progress and problems of school district reorganization; (2) need of revision of school laws; (3) administration functioning and interrelation; (4) questions of state aid; (5) methods of acquiring adequate revenue for local schools; (6) any problems of the general welfare of schools." Four reasons are offered for the School Problem Commission's success: (1)"legislative membership...maximizes chances that recommendations will...accord with legislature's budget estimates; (2) major organized interests are represented; (3) public education is removed from partisan politics (made bi-partisan); (4) commission's record has gained trust of legislators." "Perhaps most significant in these reasons is that ten of the seventeen members are legislators." School Problems Commission is an informal, policy formulating device of legislature, which also placates organized, educational groups.

Is the School Problems Commission supporting innovation? Is such an agency viable on the federal or local levels? "All of the interviewers indicated that School Problems Commission was primarily a force for stability and moderation, not policy innovation as such. Consensus was desired above change. "All that can be said (about second question) is that there is nothing inherent in the creation of a special commission that will insure that education will be insulated from conflict." The absence of conflict is seen as imminently desirable--even above the possibility of innovation.

Paul E. Marsh, "Wellsprings of Strategy: Considerations Affecting Innovations by the PSSC."

Innovation is (1) adoption of PSSC--from five training institutions in 1958 to one-fifth of all secondary school students using PSSC in 1963; (2) the procedure of committee-established curriculum; (3) the nature of the curriculum itself. Claim: The focus of the Committee was "national, scientific, technological." Approach was materials-centered: Materials were seen as easier and less costly to change frequently than are people, they could be distributed widely while maintaining their integrity. National Science Foundation financial support contingent on PSSC material being scientifically acceptable, educationally feasible, and commercially diffusable. Submitting PSSC to scientific community, at large for commentary considered "professional: it concerned basic training of scientific manpower; cultural: it introduces students, whether potential scientists or not, to the scientific workings of the physical world in which all lived." Adoption: dissemination of information that program existed through institutes. "For...teachers, institute participation appeared to be vocational education; what can be inferred to have tipped the balance toward the PSSC was the chance to see its goods working in classrooms." (p. 265)(Cf. Brickell, 1961) "The process of diffusion has ignored the traditional boundaries of school administration. Clusters (of adopters) have crossed state lines as if they did not exist....Diffusion seems to have depended at least partially on a pedagogical judgment by teachers about the fitness of PSSC materials for ordinary classroom use. Such decisions (were) made on the basis of direct observation or of firsthand reports...." (p.265) Claims tacitly agreed on conclusions reached by teachers and scientists were more money necessary for schooling, anticipated that money from government, politics must not control disbursement, more research and development in teaching and learning required, particularly in any program such as PSSC must be voluntary. Consequences could not be foreseen, each user requires help and support from other users of the PSSC. In absence of explicit policy conclusions, Marsh concludes teachers themselves "reconciled scientific strategy and educational practice."

Gordon N. Mackenzie, 1964, "Curricular Change: Participants, Power, and Processes."

Six focal points of change--or determiners of curriculum--to eligible curriculum. It's necessary to change one or more of these six (1) Teachers: new or retrain? (2) Students: racial integration, geographic boundary modification, class size reduction, special classes. special classes. (3,4,5) Subject matter: method vs. content, presence or absence of appropriate and sufficient materials, including teacher as determiner of content by presentation. (6) Time: allotment per subject, lengthening or altering

the week, days of week used--e.g., Saturdays, evenings, summer. Definition of curriculum: "The learner's engagements with various aspects of the environment which have been planned under the direction of the school." Attempt to conceptualize the curricular change process: curriculum is defined, six determinants (above) discussed; influence of cultural context is noted; participants in change process are listed, power sources, methods of influence are analyzed; phases of the change process are described.

"Does any one determiner, or any combination of them, hold more potential than others as a focal point for attnetion--in curricum change efforts? What is the optimum or necessary interrelationship among determiners? What is the importance of organization or patterning within each category of determiners? Are the six focal points for bringing about curriculum change also the keys to stability? Who is able to manipulate each of the various determiners--and by what methods and under what conditions can they be manipulated? Cultural influence briefly referred to as being both national and local--national security, letter reading, mathematics. Participants in change--internal: students, teachers, principals, supervisors, superintendents, boards of education, citizens in local communities, state legislatures, state boards or departments of education, state and federal courts. (Teachers are determiners of change both within their own classroom and, because of changes in students, within other classrooms.) "In many instances, superintendents appeared to be the most powerful single participant in change. Illustrations were found in which he interviewed directly relative to all of the determiners--e.g., employing new teachers, introducing new courses, selects new texts, change time allotments, functions in conjunction with school boards, teachers, citizenry, other administrators. Boards of education: very influential: can make decisions over objections of staff, fiscal power, establishes climate in which innovation is or is not considered, determines manner, number of appointments. External participants: non-educationists (individuals and groups) e.g., publications such as Saturday Review, articles in media about education; foundations, stimulus to change through information or money; academicians--at times as temporary internal particularly, on survey teams, change consultants, re-educating teachers, through writing on education problems; business and industry--textbook publishers, technological contributions, mass media; educationists--professional organizations; federal government--Office of Education, NDEA. Sees two conditions having bearing on interaction between internal and external participants: (1) distance from classroom (e.g., legislators, school board, teacher, each better able to be specific) (2) competence (laymen as opposed to educator influence). Sources of power and methods used by participants (1) advocacy and communication--development of plan for change, persuasion of others of its value, "The process of exerting influence in favor of a proposed change is based on power, and is essentially political in nature." (2) Prestige--social class, personality,

attitudes, skills (3) competence (4) money or goods (rates this as highly significant) (5) legal quthority (setting standards) (6) authority deriving from custom or precedent "The process of changing the curriculum appears to be one of directly changing the determiners of the curriculum, or modifying the expectations and values of those able to change the determiners." Phases in change process initiated by internal or external participants: criticism of existing curriculum or of its consequences; proposal of changes; development and clarification of proposals for action; evaluation, review, reformation; comparison of alternatives. Phases initiated by internal participants: implementation. Where attempts at change failed, reasons cited were: inadequate planning, insufficient staff preparation, lack of commitment by staff or community, "other" deficiencies in resources or power. While both internal and external participants intiated change, external participants appeared dominant initiators, not educators themselves, as indicated by the literature.

Daniel E. Griffiths, "Administrative theory and change in organizations"

Definitions: formal organization - "an ensemble of individuals who perform distinct but interrelated and coordinated functions, in order that one or more tasks may be completed (this task is sanctioned by the society in which the organization functions)" administration - "the process engaged in by all the members of the formal organization to direct and control the activites of the members of the organization." change - "an alteration in the structure of the organization, in any of its processes, or in its goals or purposes." degrees of change all included in this definition. Systems approach to a theory of administrative change based on work by G. Hearn (Theory Building in social work, Toronto: University of Toronto Press, 1958) and J.G. Miller ("Toward a general Theory for the behavioral sciences," American Psychology, 1955, 10, 513-531.) System - "a set of objects together with relationships between the objects and between their attributes." (Hall and Fager, "General systems," in L. Van Bertolanffy and A. Rapoport (eds.) Yearbook of the Society for the Advent of General Systems Theory). Systems may be open (related to and making exchanges with its environment) or closed (not related to and not making exchanges with its environment). Open systems tend toward a steady state, closed systems are characterized by an increase entropy. Open systems have inputs and outputs, maintain themselves in steady states, are self-regulating, display equifinality (i.e., identical results can be obtained from different initial conditions), maintain steady states through interplay of sub-systems operating as functional processes, and through feedback processes, displays progressive segregation (hierarchical divisions into subsystems with modicum of independence). Acknowledges characteristic of organization to be steady, change resistant. Reference to open-system features: since the steady state is typical, the major impetus for change comes from outside rather than inside an organization. Since organizations are

open-systems [claim], they have a self-regulating character which causes them to revert to the original state following a minor change made to meet demands of the supra-system [the environment]. Further claims in proposition-form: "The degree and duration of change is directly proportional to the intensity of the stimulus from the supra-system." "Change in an organization is more probable if the successor to the chief administrator is from outside the organization, than if he is from inside the organization." "Living systems respond to continuously increasing stress first by a lag in response, then by an over-compensatory response, and finally by catastrophic collapse of the system." Under conditions inhibiting change: "The number of innovations is inversely proportionate to the tenure of the chief administrator." "When change in an organization does occur, it will tend to occur from the top down, not from the bottom up." "The more functional the dynamic interplay of subsystems, the less the change in an organization." "Most changes result as responses to the demands of the supra-system. The magnitude and duration of change is directly proportional to the intensity of the stimulus from outside. The hierarchical structure makes innovation from the bottom virtually impossible, and the independence of the sub-systems isolates them from innovative activity. The functional nature of the activities of each sub-system generates conflict-reducing behavior which is counter to change-inducing behavior. The longer the tenure of the chief administrator, the fewer the changes."

Matthew B. Miles, 1964, "On Temporary Systems"

Temporary structures operate both within organizations and between them; participants are aware from start that the structure will cease to exist at some foreseeable time which may be (1) chronological and explicit, (2) dependent on the occurrence of a specified event (end of a project) (3) contingent on achieving a state of affairs (shrink and patient) Temporary system functions (1) compensatory: to absorb, counteract or make up for organization deficiencies (2) achieve short-term task (3) bring about changes in persons or organization. It is possible for temporary systems to achieve these functions where permanent organizations cannot because: (1) there exists the pressure of limited time (2) there is a limited and sharply focussed amount of content which reduces the number of decisions required and creates the feeling within participants that the goal is within reach (3) because of selectivity required to achieve limited goals, personnel already have in common the skills necessary and the need for socialization may be reduced (4) physical and social isolation of participants makes it easier for them to concentrate on the present task (5) the size of the group and of the space in which to function. The power structure of temporary systems develops without a necessary hierarchy; the size and power structure make it possible for each person to exert influence on the direction of the group. Because ~~it~~ is possible in such a limited, temporary atmosphere to establish

interpersonal trust, there is greater freedom to take risks, to participate on new levels and in new ways. Possible problems with temporary systems: assumptions of too much work by participants, setting of unrealistic goals, lack of small group skills, alienation from surrounding environment, difficulty in linking temporary system achievements with permanent organizations' functioning. RE: education and temporary systems: could provide opportunity to establish an experimental or demonstration atmosphere about an innovation likely to receive public disapproval otherwise (risk reduction), could improve flexibility of education organization, provide change of managable size for administration. Can change norms, people, relationships, become a step taken.

Henry M. Brickell, "State Organization for Educational Change: a Case Study and a Proposal"

Claims three different, irreconcilable processes of innovation: design, evaluation and dissemination. "The ideal circumstances for the design of an improved instructional approach are artificial, enriched, and free." "The ideal circumstances for the evaluation of a new instructional approach are controlled, closely observed, and unfree." "The ideal cirumstances for the dissemination of a new approach through demonstration "are those which are ordinary, unenriched, normal" [Cf., adoption as a consequence of observation/demonstration -- PSSC, Rogers and Shoemaker] But no show-off school: simply an instance of an experiment. Claims two distinct gropus with potential influence in changing public schools: (1) "the public" and board of education which is <u>external</u> (2) the profession, which is <u>internal</u> (both teachers and administration). It is suggested that the public, and its representative the school building, do not urge specific innovations but instead provide an atmosphere of congeniality or hostility. Claims <u>authority</u> "is a critical element in innovation, because proposed changes generate mixed reactions which can prevent consensus among peers and result in stagnation." [Implication: change can be legislated, even despite resistance by those who must implement the change.] States new instructional programs [innovation?] are introduced by administrators, and that structural changes in an institution depend "almost exclusively upon administrative initiative" -- that teachers, even when free to do so, seldom initiate "distinctly new types of working patterns for themselves." [are structural changes synomymous with innovations?] Teachers' independent professionalism is dismissed, is described as just another member of organization with very limited room for change initiating. Few new instructional programs are invented within any school system--rather these are adopted or adapted from existing programs at other schools. "The most persuasive way of learning about an innovation is to visit and observe" a successful program in another institution. <u>Initiation and implementation are successful, despite intial resistance, if there is 'elaorate help" provided to teachers involved</u>. "An innovation which falters is more

likely to be suffering from simple staff inability than from conscious or unconscious sabotage." Success is attributed to Hawthorne effect. New York State Education Department: no effect due to size of department compared to size of system. Colleges and universities are of little significance in the introduction of innovation in local schools: (1) college courses are general while local needs are particular, (2) teachers are not trained to carry out new programs until those programs are in use in public schools. Professional associations are important in dissemination through informal conversation. Aso cites foundations, commercial organizations, campus schools as components in effecting change which are of negligible importance.

State-level agency was created to (1) "stimulate and finance the design of new instructional programs for elementary and secondary schools." (2) "arrange and finance...the evaluation of new programs through field testing." Reasons for state financing (1) expense of innovation (2) risk sharing divided between localities and state (3) requirement of wide-spread testing makes state-level agency appropriate (4) results are general. Evaluation is important on state level because local schools will not finance rigorous evaluation of an innovation to determine its merits for schools in general, but will introduce in the first place innovations already believed to be improvements on that local school's program.

Centralization of responsibilities for experimentation, financing, and evaluation of innovation to state level education agency is claimed to be advantageous in reducing duplication of efforts and in speeding pace and improving direction of change.

Sloan R. Wayland, "Structural Features of American Education As Basic Factors in Innovation."

Claims merits of innovation and its differences from existing programs are the focus when innovation is proposed. Assumption: innovation can be incorporated without organizational reconstruction or impact on other parts of a system. Attributes rejection of innovation and problems occurring for those initially in favor of innovation, to a misconception of structure of American education. Structure: "Those regularities of human behavior within a specified social system which are so fully institutionalized that they persist within a limited range of tolerance, in spite of changes in membership of the sytem." (C.F. Gross' definitior of "role"; also, Gross' definition of "organizational change" would seem to take into account the very misconception Wayland claims distorts attempts at innovation adoption.) Case: in addition to formal organization of schools (e.g., OE school boards) there are ancillary structures (e.g., PTA, companies manufacturing school buses, text books, instructional materials). The formal system represents only part of the educational structure and attempts at innovation must consider ancillary structures or innovation will be unsuccessful. The integration of educational systems vertically must also be accommodated in innovation attempts.

(Vertical integration exists because of necessity of continuity from level to level, each level demands of lower ones high quality, efficiency; leadership at lower levels are likely to be products of and reflect values of higher levels, attempts to maintain facade of unity of knowledge. Structurally, vertical integration is due to graduate departments controlling knowledge production and admission into doctoral programs; admission requirements of higher levels serve as determinants for lower levels.) Claims that, because of national recruitment of teachers, successful movement of students from school to school, national market for instructional materials, national examination system, a national educational system exists. Hence, attempts at innovation on the local level will find difficulty in introduction and maintenance of those innovations. Even the states, "which are legally autonomous educationally," are so linked with other states through ancillary structures that there exist serious limits on innovation (cites Arkansas- Ford Foundation experience as evidence to support latter assertion). Ancillary structures are not present to same extent in other societies because the functions they perform are inclued within the formal organization itself. Implication: centralization increases ability to control efficiently, daily operation as well as necessary change. High rate of turnover in staff necessitates organization features which remain stable and are unaffected by staff members at any point in time. So too is curriculum established and fixed to maintain continuity regardless of staff change. Such stable featues of school systems as assumption of general level of competence of teachers, uniformity or curricula, etc., tend to equalize quality of educational experience for any given cohort of students. "...Schools are essentially bureaucratic structures, and the teacher's role is largely that of a functionary."

Richard O. Carlson, "School Superintendents and Adoption of Modern Math: A Social Structure Profile."

Article intended in part to counter Mort's assumption that the superintendent is merely a victim of local school budget and is therefore of negligible importance in explaining innovation adoption. Counter: "The position a superintendent holds in the social structure of school superintendence is directly related to his rate of adoption of educational innovations." Claims superintendent is to school system as farmer is to farm, as doctor is to the drugs, thus glossing over the one-man operation of farming and medicine and obscuring the organizational position of superintendent. Serviceable definition of social structure, but does not take account of generic differences between the social structures of occupational-geographic groups like farmers, of formal organizations like school systems, and of professional groups like doctors. Relies on indicators of social status such as prestige among other superintendents, amount of interaction with other superintendents.

Gerhard Eichholz, Everett M. Rogers, "Resistance to the Adoption of Audio-Visual Aids by Elementary School Teachers: Contrasts and Similarities To Agricultural Innovation."

The authors point out that most diffusion studies (they cite Mort's work in particular) have dealt with adoption. "If adoption is the full-scale use of an innovation, rejection is the non-use of an innovation. If acceptance is worthy of study, rejection should be also." The authors propose the evaluation of instances of rejection. They subscribe to the stages listed by Rogers and Shoemaker through which the individual passes in adopting an innovation: awareness, interest, evaluation, trial, adoption.

The most significant contribution this article makes to the literature on organizational change is to offer a discussion, though a brief one, of the necessity of being clear about the unit of adoption. This study uses the individual as the unit of analysis, "although school norms relevant to innovativeness were considered. When the school or school system is used as a unit of analysis, much of the individual variation in innovativeness and other variables is cancelled." The authors suggest the need of further studies of adoption/rejection using the individual teacher as the unit of analysis, while taking account of school norms concerning innovativeness. The authors point out that it is important to keep in mind the distinction between adoptors who are members of a group, and so adopt because the group adopts, and those who adopt an innovation but who, because they happen to share with other adoptors some similarity -- such as being all farmers -- may be referred to as a category of adoptors whose decisions may be aggregated for purposes of study only.

Matthew B. Miles, "Innovation in Education: Some Generalizations."

In this chapter, Miles ties together all of the articles he has assembled in this volume. From his overview he draws some observations. Among these are the following: "Educational innovations are almost never installed on their merits." "If an innovation is expensive and its profit returns are minimal, the chances of widespread diffusion are unlikely." "Direct experience with a particular device and any associated materials seems essential for an adoption decision." "...Innovations which are perceived as threats to existing practice, rather than mere additions to it, are less likely of acceptance." "Any innovation implying or requiring important value changes in accepters (such as those dealing with interpersonal relationships, race relations, religious commitments, etc.) will encounter difficulty since much more than the nature of the innovation is at stake." "In most cases, the initiation for change in an educational system appears to come from outside (non-local)."

The article also offers a useful definition of the concept of strategy -- a concept often used but seldom defined in the literature of organizational change. "Certain characteristics of strategies have been asserted to make for effectiveness: comprehensive attention to all stages of the diffusion proces; creation of new sturctures, especially by systems outside the target system; congruence with prevalent ideology in the target system, such as beliefs about the importance of local control; reduction of pressures on relevant decision-makers; and use of coalitions or linkage between existing structures, or between old and new structures."

It is also Miles' claim that educational innovations are almost never evaluated on a systematic basis. Miles notes, also, that "adoption and continued institutionalized use of the innovation by the target system, assuming that efficacy has been demonstrated, presumably represent basic criteria for judging the adequacy of an innovative effort." But Miles makes clear the fact that these criteria, and others, are "largely irrelevant to the crucial question of the actual efficacy of an innovation in increasing output -- namely, learning of students. If this difficult, much-avoided, and undoubtedly threatening question is not confronted, it does not seem likely that our understanding, or practice, of educational innovation can advance very far."